

70592

SEARCH REQUEST FORM

Requestor's

Name:

DAVE NAYEN

Serial

Number:

09666144

Date:

7/31/02

Phone:

305-2024

Art Unit:

1632

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Please search for the formula cited in
claim 1, 2 and 5

Specific species can also be found in
the "Remarks" section of the prior art. In
this search request

Clm sheet is attached

Inventor: Vaigaayanti A. Kumar 9/20/2000

POINT OF CONTACT:
PAUL SCHULWITZ
TECHNICAL INFO. SPECIALIST
CM1 6806 TEL. (703) 305-1954

STAFF USE ONLY

Date completed:

7/15
7/17

Searcher:

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Total time:

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Type of Search

☐ N.A. Sequence

☒ A.A. Sequence

☒ Structure

☐ Bibliographic

Vendors

☐ IG

☒ STN

☐ Dialog

☐ APS

☐ Geninfo

☐ SDC

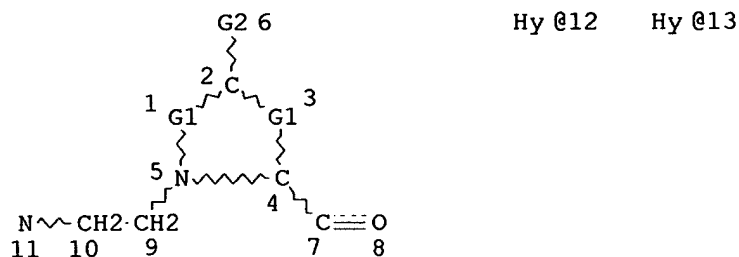
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☐ Other

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L5

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VAR G2=12/13

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ECOUNT IS E4 C E2 N AT 12

ECOUNT IS E5 C E4 N AT 13

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

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L7 56091 SEA FILE=REGISTRY ABB=ON PLU=ON L6 AND (NCNC3/ES OR NCNC2-NCN C3/ES)

L9 55 SEA FILE=REGISTRY SUB=L7 SSS FUL L5

L10 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L9

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L10 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:710917 HCAPLUS

DOCUMENT NUMBER: 136:216993

TITLE: Synthesis and binding affinity of a chiral PNA analogue

AUTHOR(S): Li, Ying; Jin, Tao; Liu, Keliang

CORPORATE SOURCE: Beijing Institute of Pharmacology and Toxicology, Beijing, 100850, Peop. Rep. China

SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2001), 20(9), 1705-1721

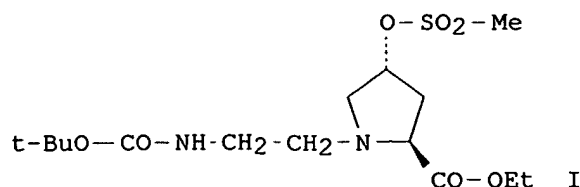
CODEN: NNNAFY; ISSN: 1525-7770

PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB The synthesis of a chiral peptide nucleic acid (PNA), which is composed of N-aminoethyl-cis-4-nucleobase-L-proline units, was described. The chiral PNA monomers contg. all four nucleobases (A, T, C and G) were stereoselectively prepd. using key intermediate (I), prepd. in two steps from (CH₃)₃COC(O)NH(CH₂)₂Br and trans-L-hydroxyproline Et ester hydrochloride. The x-ray diffraction data from a single crystal confirmed the configuration of a key intermediate. Binding activity of the oligomers with their complementary DNA targets was also investigated.

IT **386212-22-2P 386212-24-4P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of cis-L-proline-based PNA oligomers and their hybridization characteristics with DNA)

RN 386212-22-2 HCAPLUS

CN Adenosine, 2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxy-, complex with peptide nucleic acid (H-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl)-Lys-NH₂ (1:1) (9CI) (CA INDEX NAME)

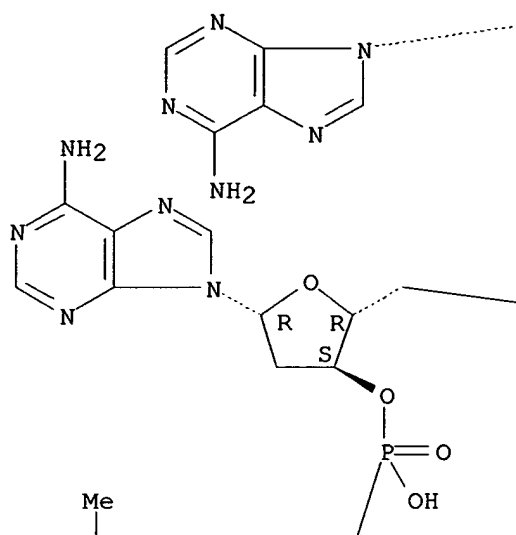
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CRN 386212-21-1

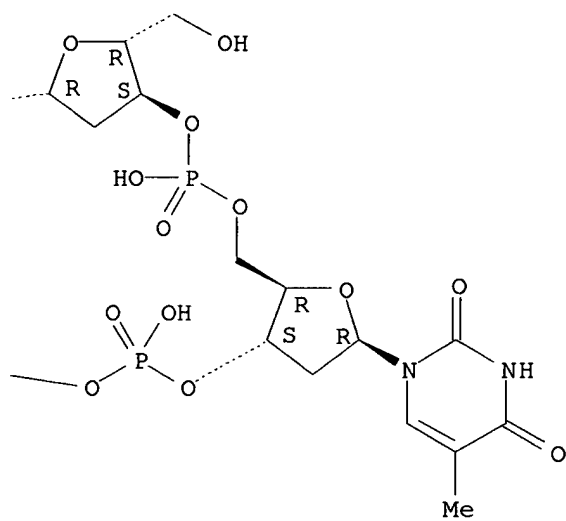
CMF C80 H101 N28 O46 P7

Absolute stereochemistry.

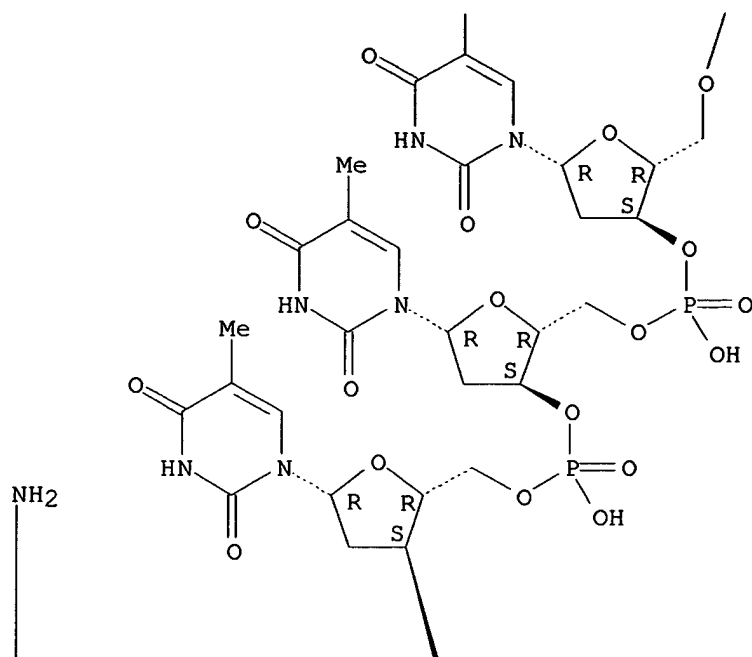
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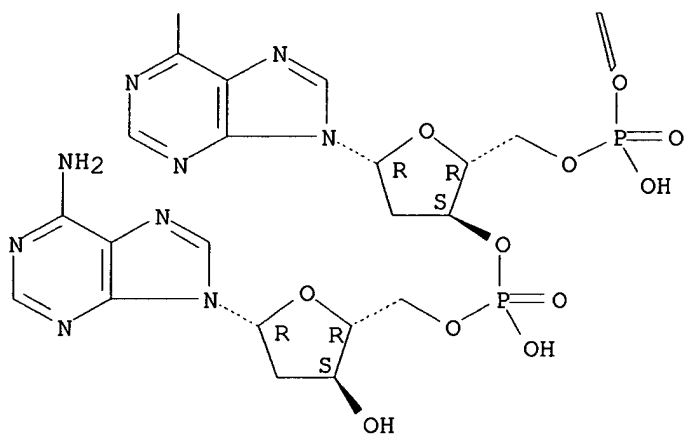
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CM 2

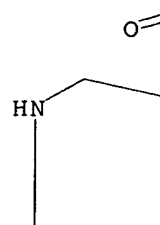
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CMF C102 H139 N47 O17

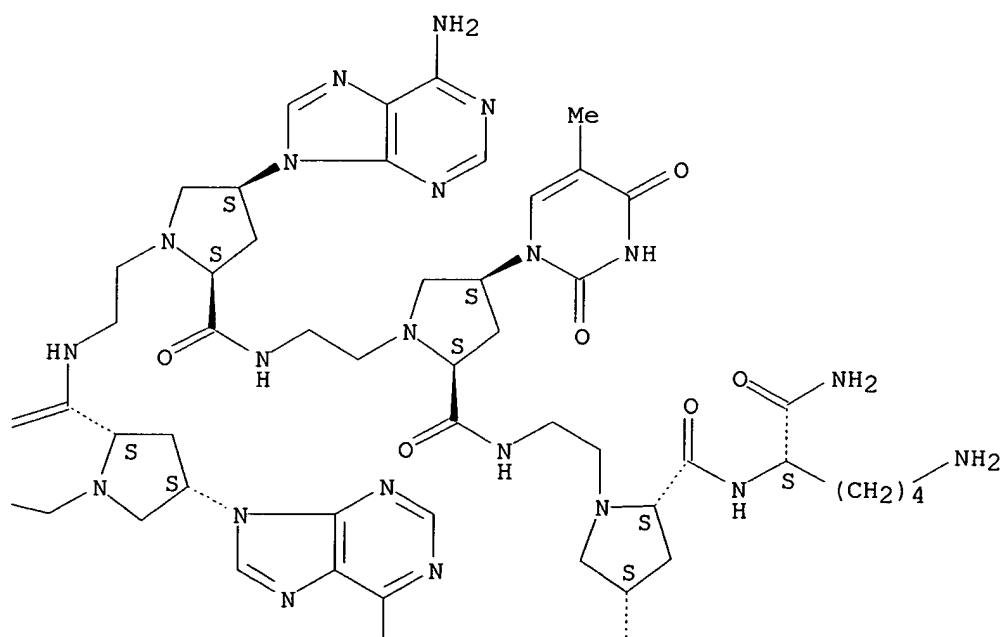
Absolute stereochemistry.

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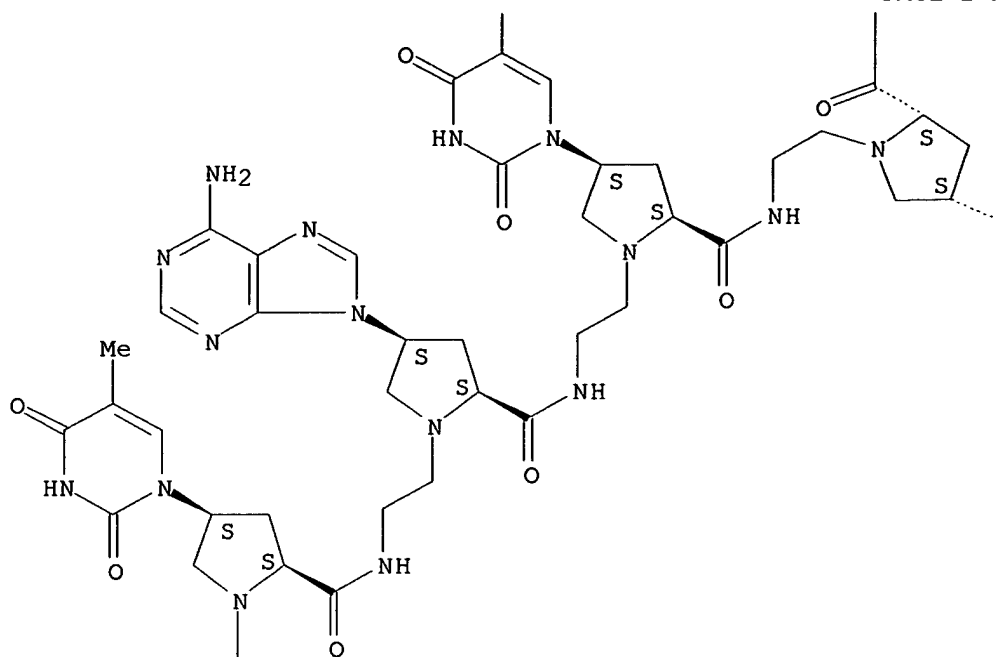
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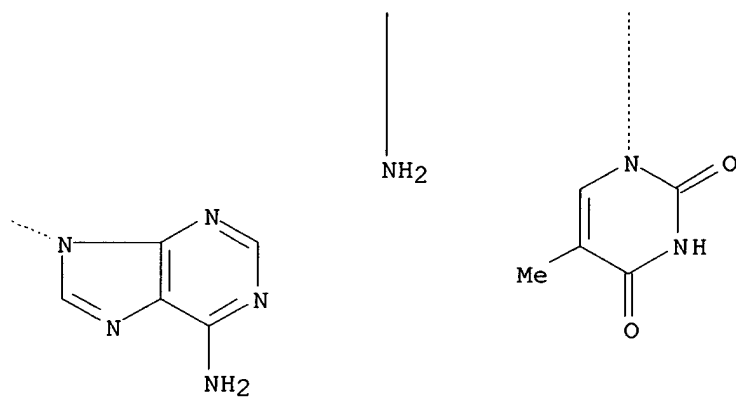
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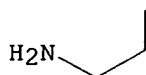
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PAGE 2-B



PAGE 3-A



RN 386212-24-4 HCAPLUS
 CN Adenosine, 2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-
 thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-
 (3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-

2'-deoxy-, complex with peptide nucleic acid (H-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl)-Lys-NH₂ (1:1) (9CI) (CA INDEX NAME)

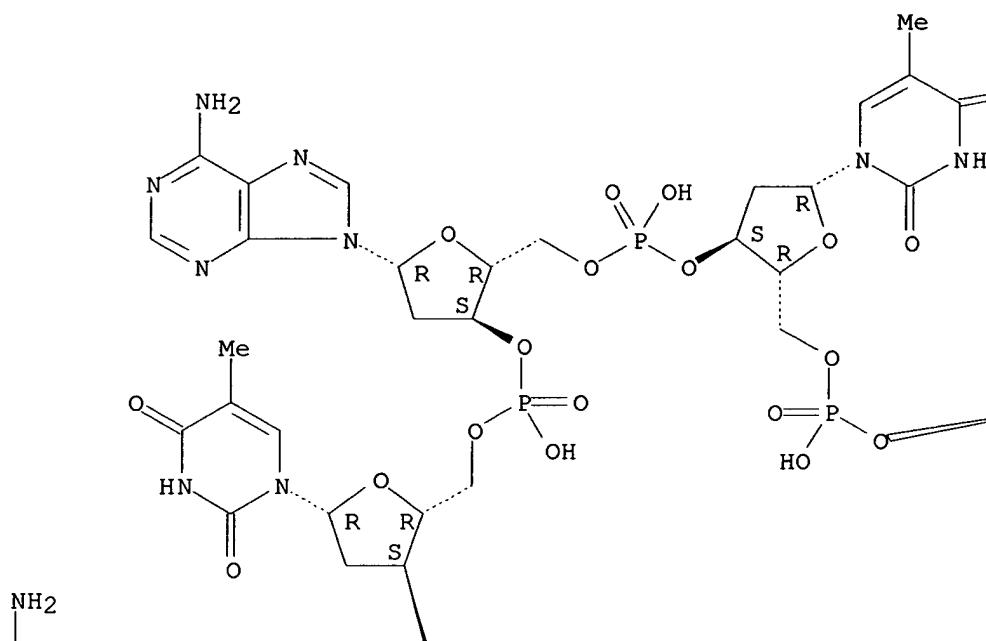
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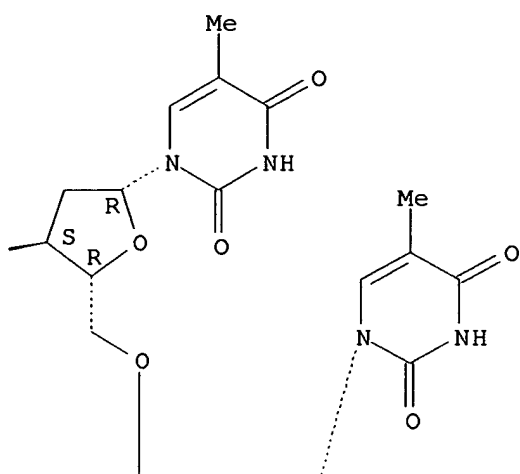
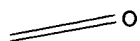
CMF C80 H101 N28 O46 P7

Absolute stereochemistry.

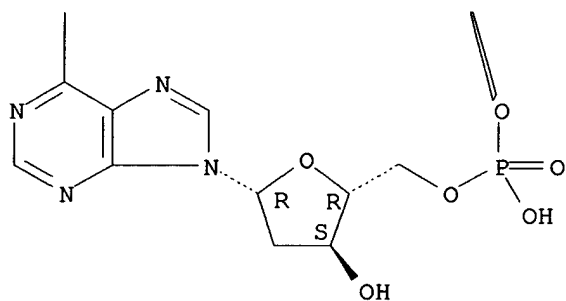
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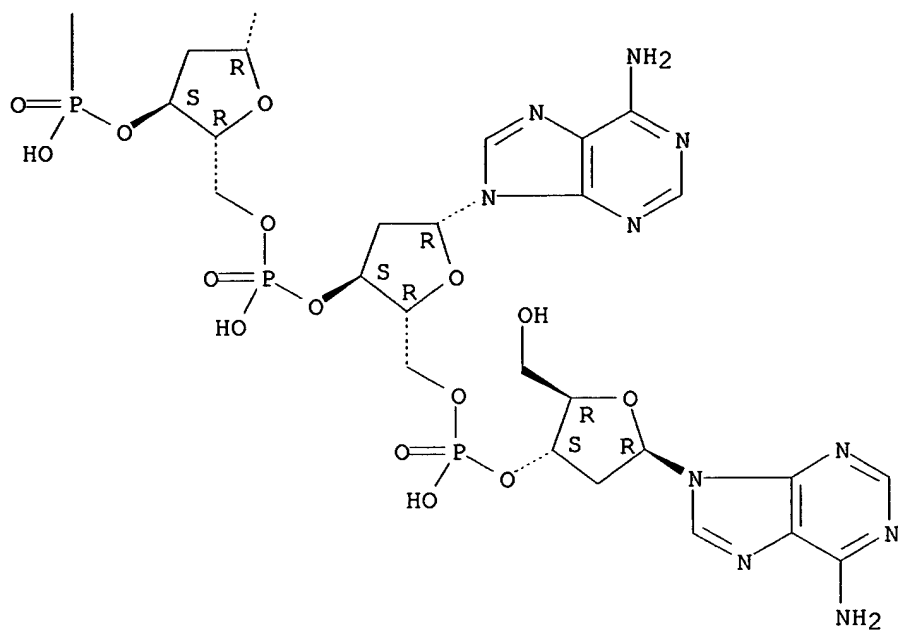
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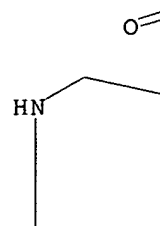
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CRN 386212-19-7
CMF C102 H139 N47 O17

Absolute stereochemistry.

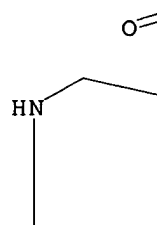
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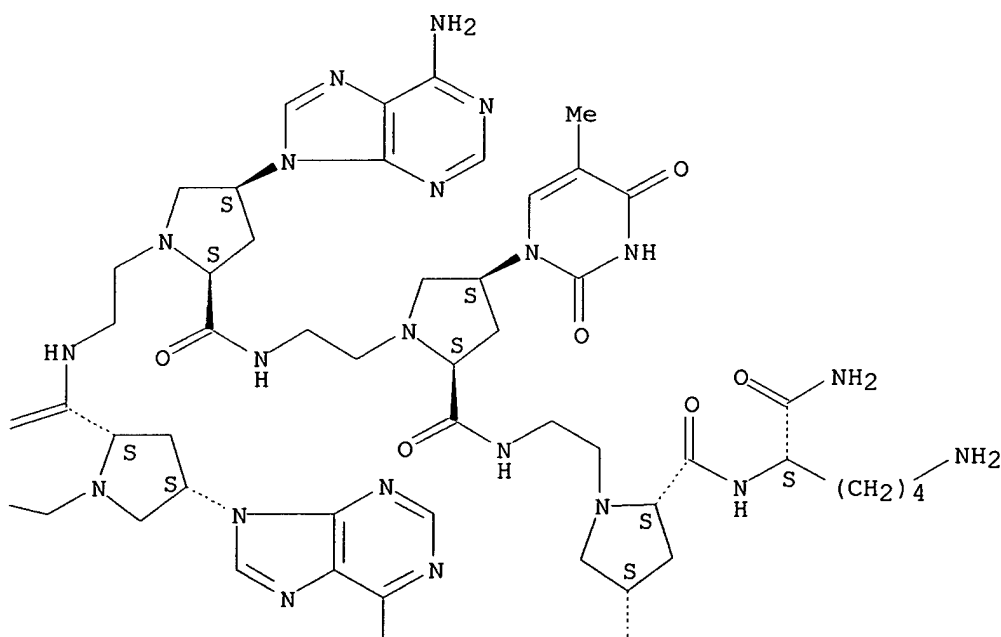


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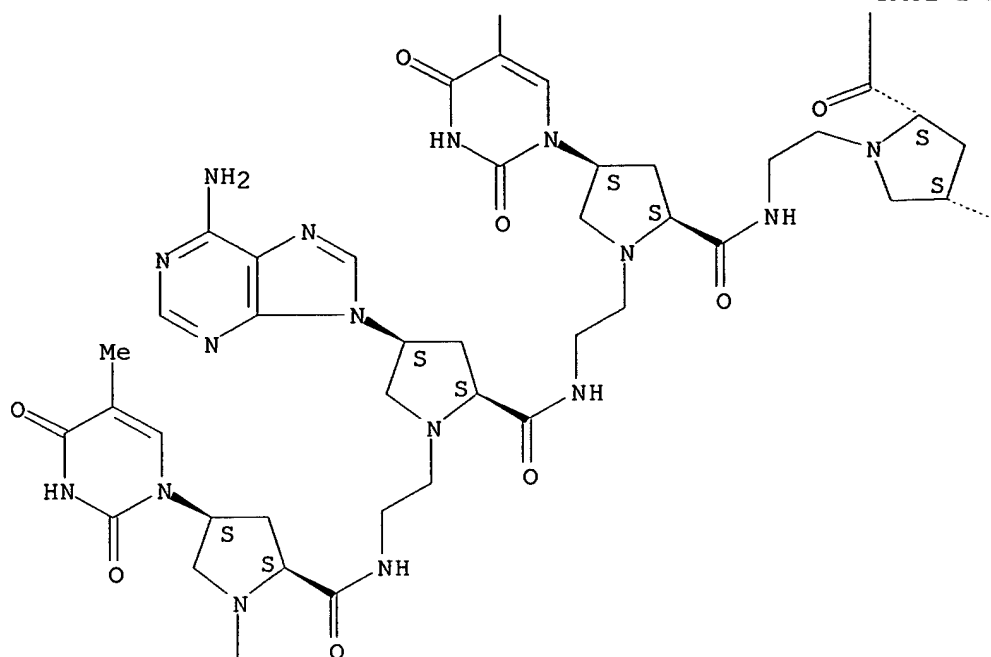
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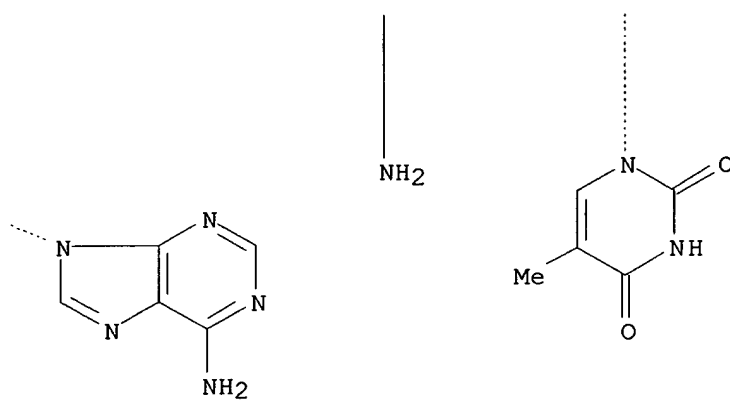
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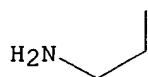
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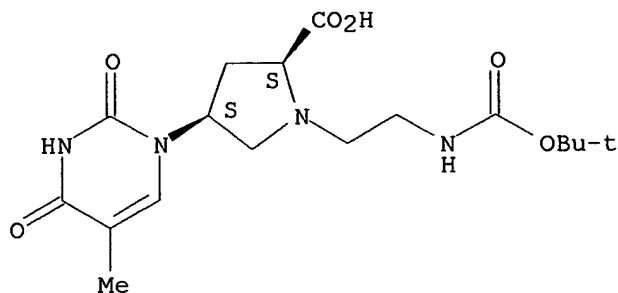
IT 253307-71-0P 340961-43-5P 340961-45-7P
 371970-41-1P 386212-13-1P 386212-14-2P
 386212-15-3P 386212-16-4P 386212-17-5P
 386212-18-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. of cis-L-proline-based PNA oligomers and their hybridization
characteristics with DNA)

RN 253307-71-0 HCAPLUS

CN L-Proline, 4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-
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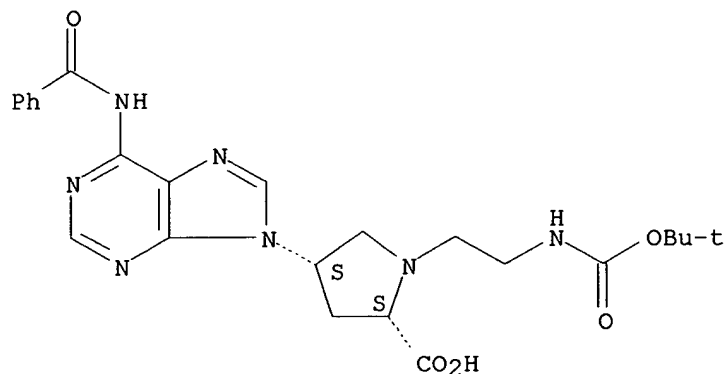
Absolute stereochemistry.



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dimethylethoxy)carbonyl]amino]ethyl]-, (4S)- (9CI) (CA INDEX NAME)

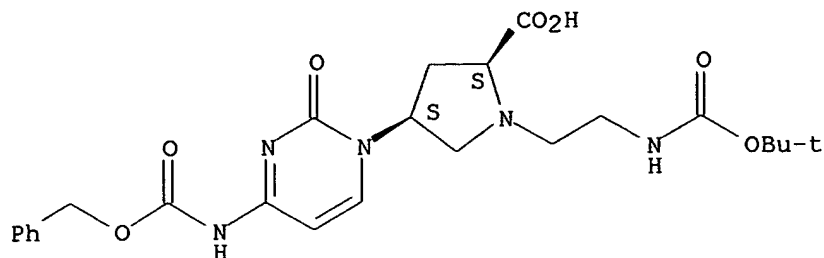
Absolute stereochemistry.



RN 340961-45-7 HCAPLUS

CN L-Proline, 1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-4-[2-oxo-4-
[[[(phenylmethoxy)carbonyl]amino]-1(2H)-pyrimidinyl]-, (4S)- (9CI) (CA
INDEX NAME)

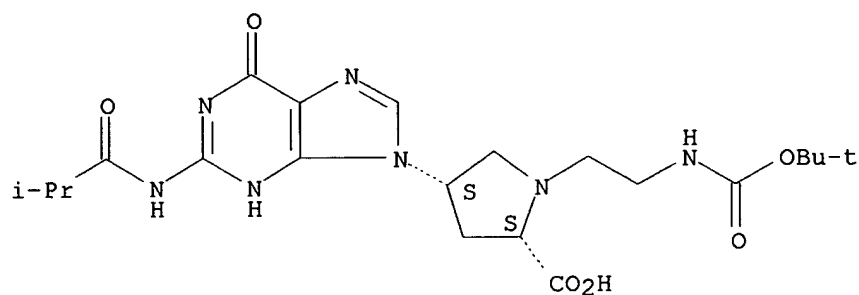
Absolute stereochemistry.



RN 371970-41-1 HCAPLUS

CN L-Proline, 4-[1,6-dihydro-2-[(2-methyl-1-oxopropyl)amino]-6-oxo-9H-purin-9-yl]-1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4S)- (9CI) (CA INDEX NAME)

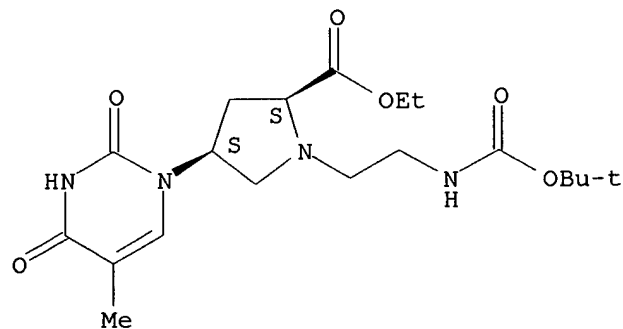
Absolute stereochemistry.



RN 386212-13-1 HCAPLUS

CN L-Proline, 4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidin-1-yl)-1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, ethyl ester, (4S)- (9CI) (CA INDEX NAME)

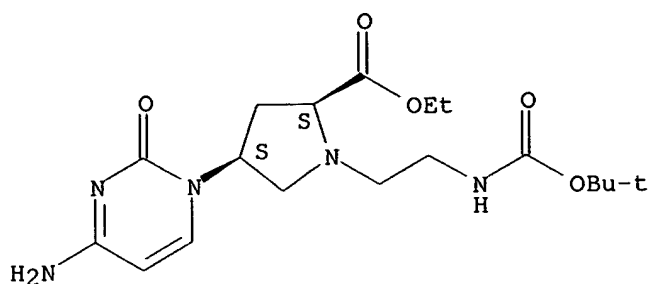
Absolute stereochemistry.



RN 386212-14-2 HCAPLUS

CN L-Proline, 4-(4-amino-2-oxo-1(2H)-pyrimidin-1-yl)-1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, ethyl ester, (4S)- (9CI) (CA INDEX NAME)

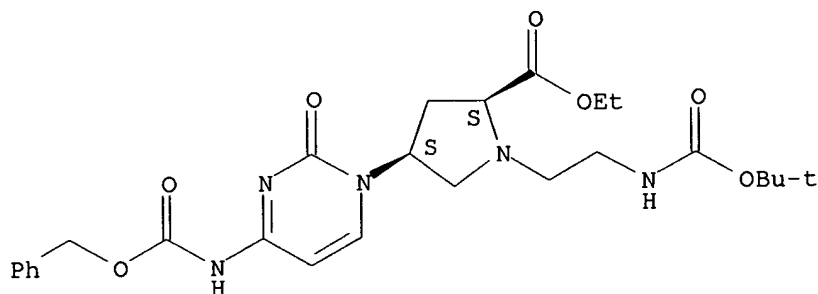
Absolute stereochemistry.



RN 386212-15-3 HCAPLUS

CN L-Proline, 1-[2-[[(1,1-dimethylethoxy) carbonyl] amino] ethyl]-4-[2-oxo-4-[[(phenylmethoxy) carbonyl] amino]-1(2H)-pyrimidinyl]-, ethyl ester, (4S)-(9CI) (CA INDEX NAME)

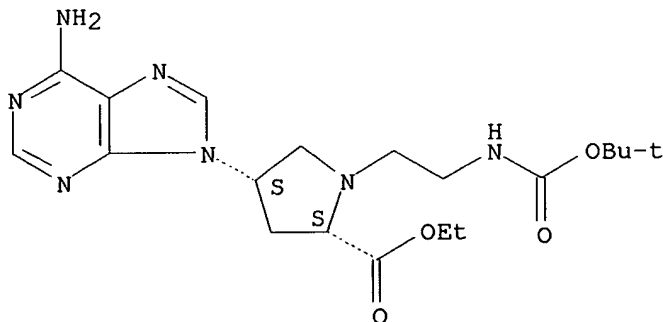
Absolute stereochemistry.



RN 386212-16-4 HCAPLUS

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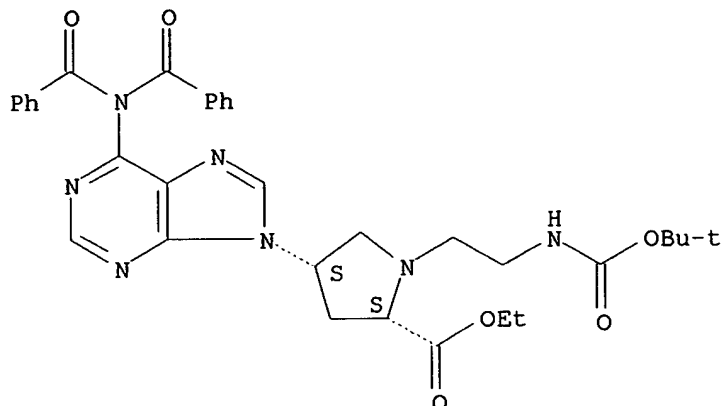
Absolute stereochemistry.



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CN L-Proline, 4-[6-(dibenzoylamino)-9H-purin-9-yl]-1-[2-[[(1,1-dimethylethoxy) carbonyl] amino] ethyl]-, ethyl ester, (4S)-(9CI) (CA INDEX NAME)

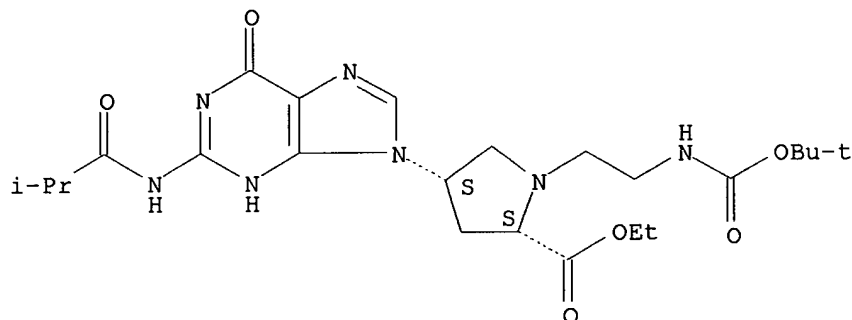
Absolute stereochemistry.



RN 386212-18-6 HCAPLUS

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Absolute stereochemistry.



IT 386212-19-7P 386212-20-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of cis-L-proline-based PNA oligomers and their hybridization characteristics with DNA)

RN 386212-19-7 HCAPLUS

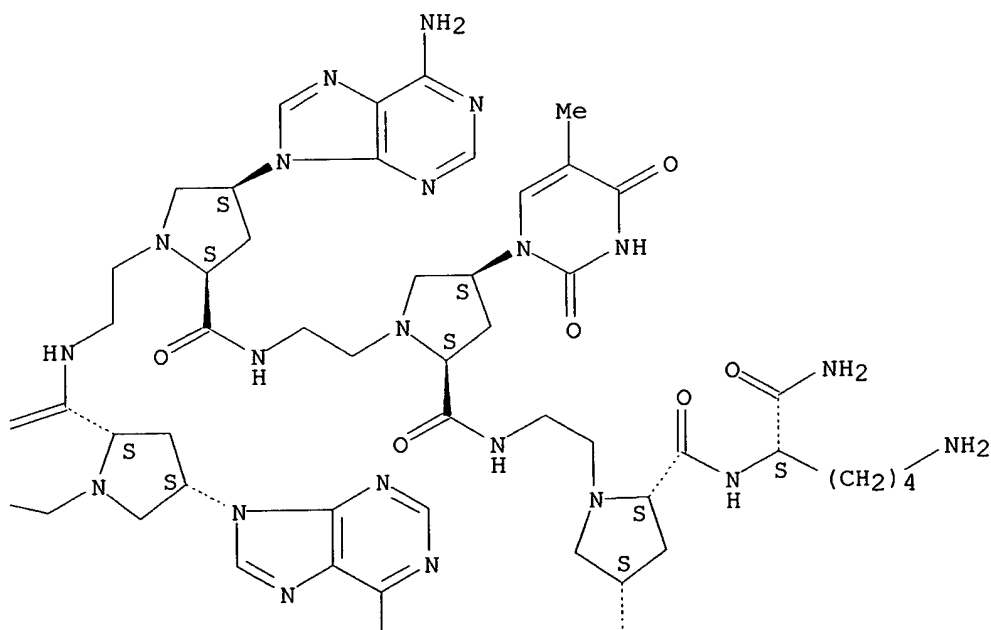
CN Peptide nucleic acid, (H-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(6-amino-9H-purin-9-yl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-L-prolyl)-Lys-NH2 (9CI) (CA INDEX NAME)

Absolute stereochemistry.

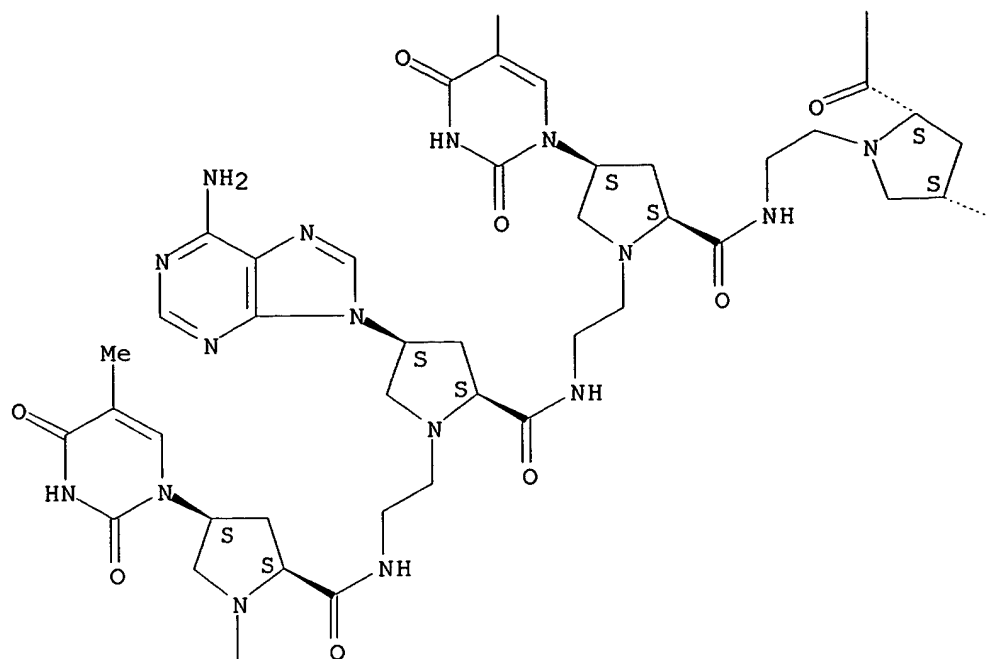
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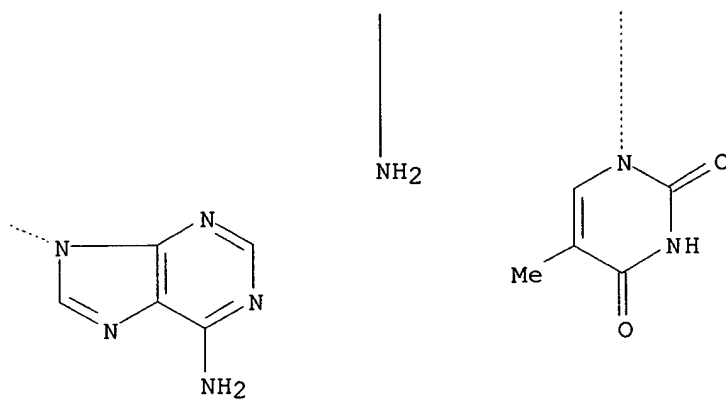
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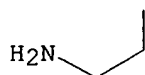
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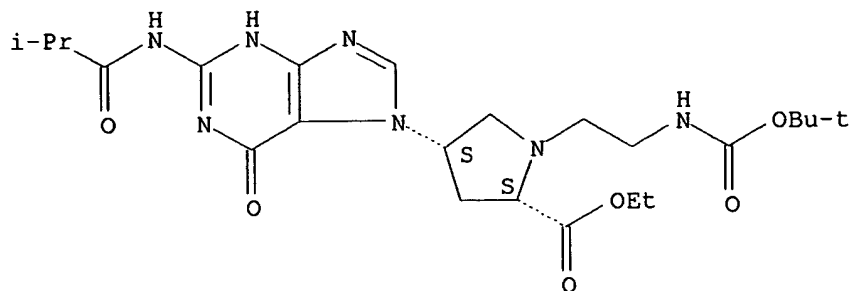


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RN 386212-20-0 HCAPLUS
 CN L-Proline, 4-[1,6-dihydro-2-[(2-methyl-1-oxopropyl)amino]-6-oxo-7H-purin-7-yl]-1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, ethyl ester, (4S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:675176 HCAPLUS

DOCUMENT NUMBER: 135:354283

TITLE: Engineering preferences of hairpin PNA binding to complementary DNA: effect of N7G in aeg/aep PNA backbone

AUTHOR(S): Kumar, V. A.; D'Costa, M.; Ganesh, K. N.

CORPORATE SOURCE: Division of Organic Chemistry (Synthesis), National Chemical Laboratory, Pune, India

SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2001), 20(4-7), 1187-1191

CODEN: NNNAFY; ISSN: 1525-7770

PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Aminoethylglycyl peptide nucleic acid (aegPNA) and aminoethylpropyl peptide nucleic acid (aepPNA) monomeric units bearing the N7-guanine nucleobase as a substitute for protonated cytosine (C+) have been shown to bind to a GC base-pair of a duplex in a pH-independent manner when placed in the third strand. The aepPNA backbone exerts a preference for binding in the antiparallel Hoogsteen mode over the parallel Hoogsteen mode.

IT 340961-45-7P 371970-41-1P

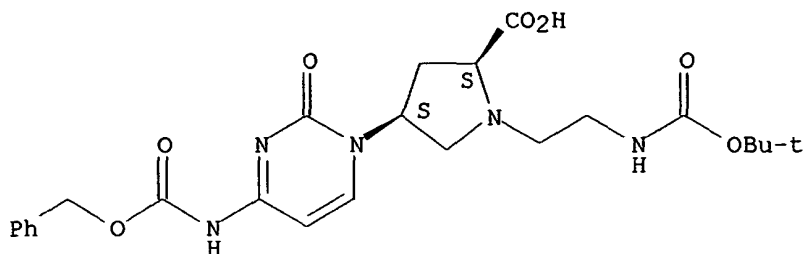
RL: PNU (Preparation, unclassified); PREP (Preparation)

(recognition of DNA is influenced by presence of aminoethylpropyl peptide nucleic acid units in triplex-forming PNA hairpins)

RN 340961-45-7 HCAPLUS

CN L-Proline, 1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-4-[2-oxo-4-[[[(phenylmethoxy)carbonyl]amino]-1(2H)-pyrimidinyl]-, (4S)- (9CI) (CA INDEX NAME)

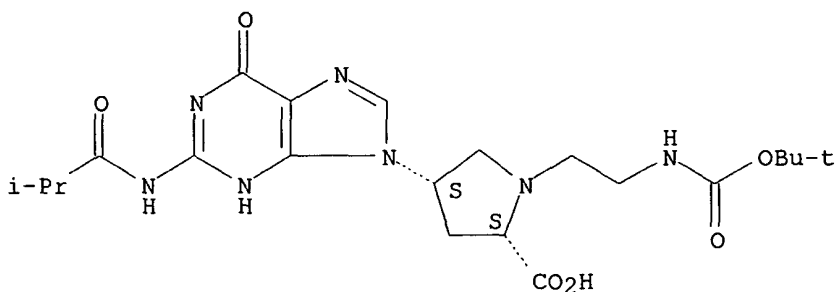
Absolute stereochemistry.



RN 371970-41-1 HCAPLUS

CN L-Proline, 4-[1,6-dihydro-2-[(2-methyl-1-oxopropyl)amino]-6-oxo-9H-purin-9-yl]-1-[2-[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



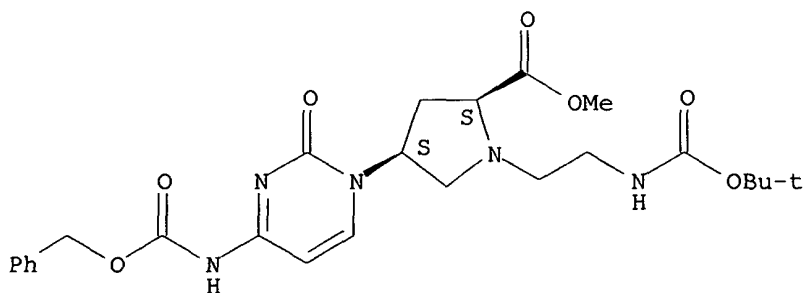
IT 340961-34-4P 371970-40-0P

RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(recognition of DNA is influenced by presence of aminoethylpropyl peptide nucleic acid units in triplex-forming PNA hairpins)

RN 340961-34-4 HCAPLUS

CN L-Proline, 1-[2-[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-4-[2-oxo-4-[(phenylmethoxy)carbonyl]amino]-1(2H)-pyrimidinyl]-, methyl ester, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

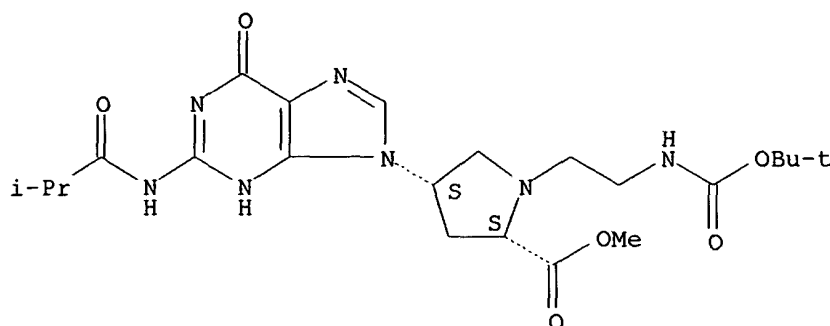


RN 371970-40-0 HCAPLUS

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(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:238460 HCAPLUS

DOCUMENT NUMBER: 135:107554

TITLE: Aminoethylprolyl (aep) PNA: Mixed Purine/Pyrimidine Oligomers and Binding Orientation Preferences for PNA:DNA Duplex Formation

AUTHOR(S): D'Costa, Moneesha; Kumar, Vaijayanti; Ganesh, Krishna N.

CORPORATE SOURCE: Division of Organic Chemistry (Synthesis), National Chemical Laboratory, Pune, 411008, India

SOURCE: Organic Letters (2001), 3(9), 1281-1284

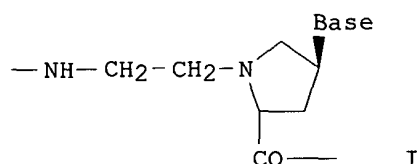
CODEN: ORLEF7; ISSN: 1523-7060

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB The synthesis of (2S,4S)- and (2R,4S)-aepPNA monomers (I; Base = adenine, guanine, and cytosine) and their incorporation at appropriate positions into aegPNA sequence leads to mixed aeg-aep backbone/mixed nucleobase PNAs. Beginning with (2S,4R)-4-hydroxyl-N-(N-Boc-aminoethyl)-L-proline Me ester (Boc = (CH₃)₃COC(O)-) or its 2R,4R isomer, the hydroxy group was mesylated, and the product reacted with protected Base to give Boc-protected Me esters of I, which, with the similar thymidyl deriv., were used to synthesize four PNAs of the sequence H-GTagAtcACT-NH(CH₂)₂CO₂H, where lower case letters indicate position of a single

substitution. The thermal stabilities of the derived duplexes with DNA are found to be dependent on nucleobase and backbone stereochem.

IT 253307-71-0 253307-76-5

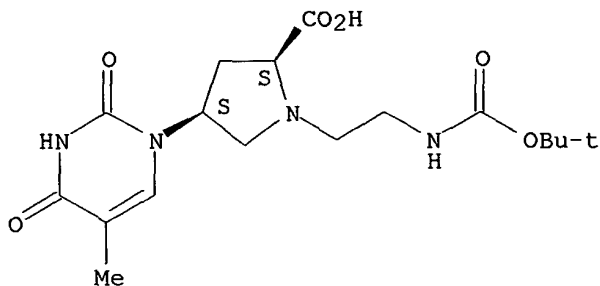
RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. and hybridization studies of mixed base PNAs contg. aminoethylprolyl backbone monomers)

RN 253307-71-0 HCAPLUS

CN L-Proline, 4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4S)- (9CI) (CA INDEX NAME)

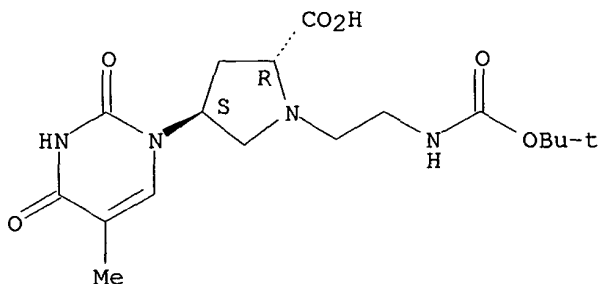
Absolute stereochemistry.



RN 253307-76-5 HCAPLUS

CN D-Proline, 4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 340961-33-3P 340961-34-4P 340961-36-6P

340961-40-2P 340961-41-3P 340961-42-4P

340961-43-5P 340961-44-6P 340961-45-7P

340961-46-8P

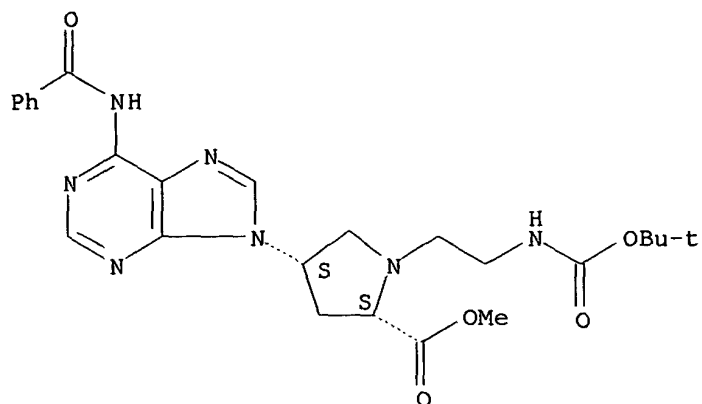
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and hybridization studies of mixed base PNAs contg. aminoethylprolyl backbone monomers)

RN 340961-33-3 HCAPLUS

CN L-Proline, 4-[6-(benzoylamino)-9H-purin-9-yl]-1-[2-[[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-, methyl ester, (4S)- (9CI) (CA INDEX NAME)

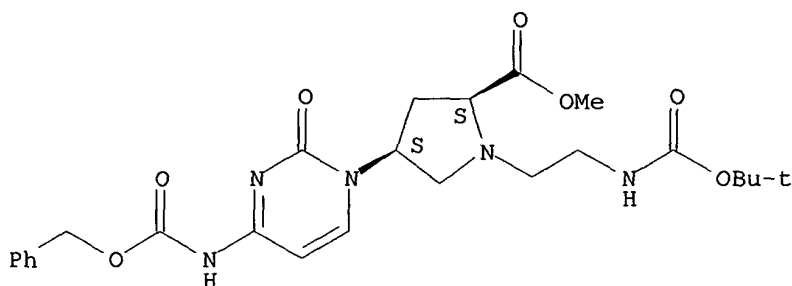
Absolute stereochemistry.



RN 340961-34-4 HCAPLUS

CN L-Proline, 1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-4-[2-oxo-4-[[phenylmethoxy]carbonyl]amino]-1(2H)-pyrimidinyl]-, methyl ester, (4S)-(9CI) (CA INDEX NAME)

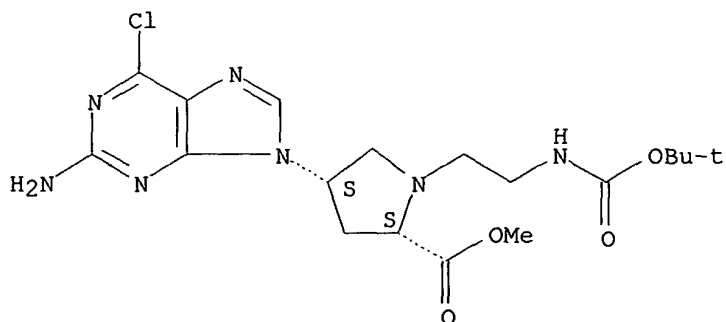
Absolute stereochemistry.



RN 340961-36-6 HCAPLUS

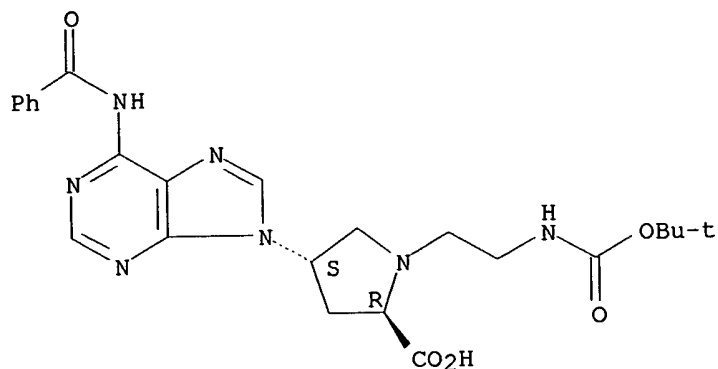
CN L-Proline, 4-(2-amino-6-chloro-9H-purin-9-yl)-1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, methyl ester, (4S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



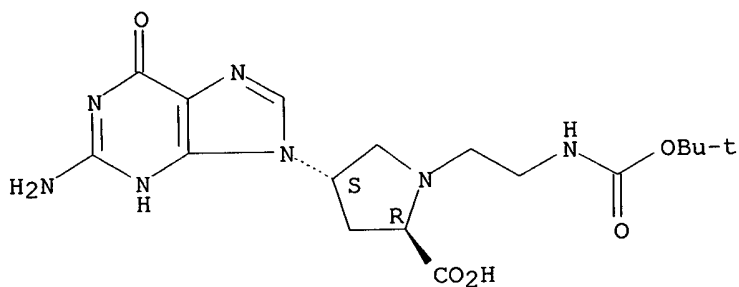
RN 340961-40-2 HCAPLUS
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Absolute stereochemistry.



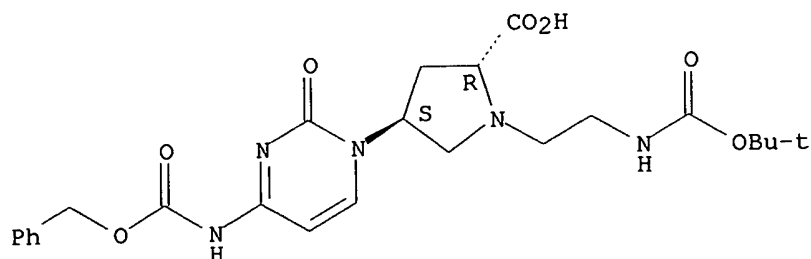
RN 340961-41-3 HCAPLUS
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Absolute stereochemistry.



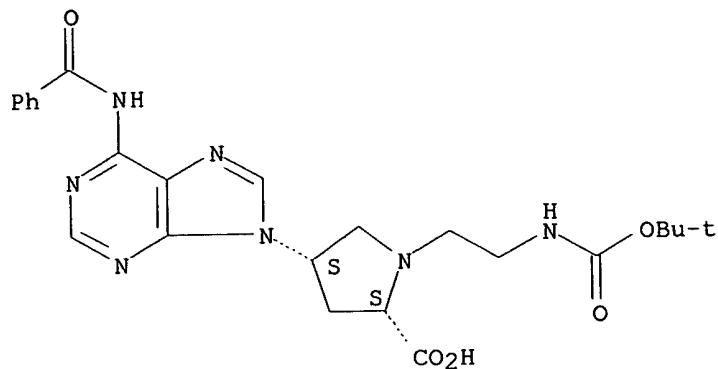
RN 340961-42-4 HCAPLUS
 CN D-Proline, 1-[2-[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-4-[2-oxo-4-[[1,1-dimethylethoxy)carbonyl]amino]-1(2H)-pyrimidin-2-yl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



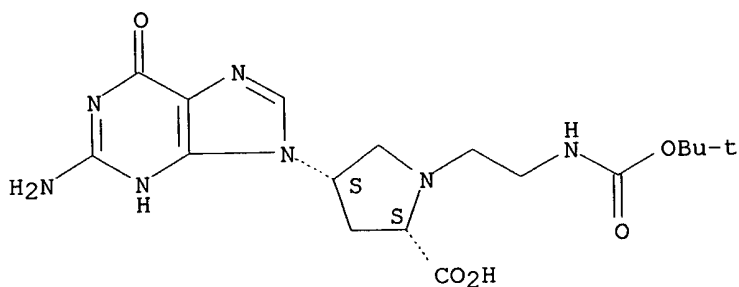
RN 340961-43-5 HCAPLUS
 CN L-Proline, 4-[6-(benzoylamino)-9H-purin-9-yl]-1-[2-[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



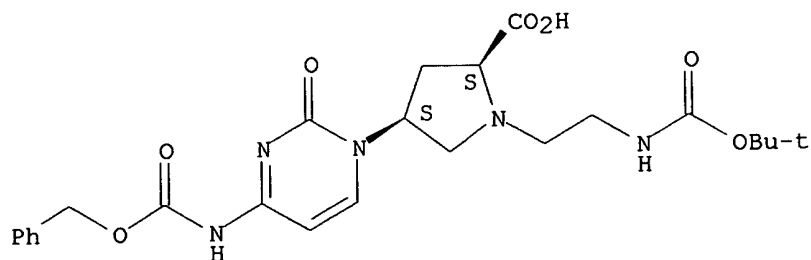
RN 340961-44-6 HCAPLUS
 CN L-Proline, 4-(2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)-1-[2-[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



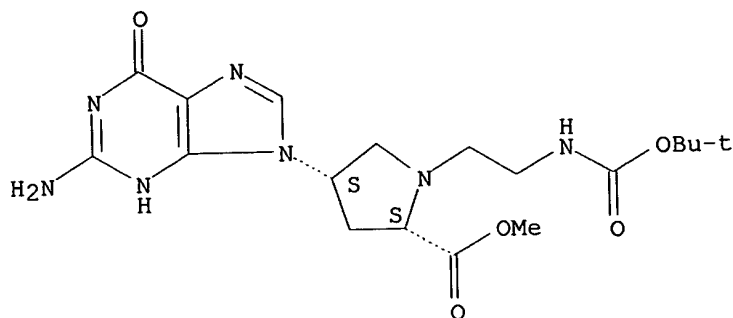
RN 340961-45-7 HCAPLUS
 CN L-Proline, 1-[2-[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-4-[2-oxo-4-[[1,1-dimethylethoxy)carbonyl]amino]-1(2H)-pyrimidinyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 340961-46-8 HCAPLUS
 CN L-Proline, 4-(2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)-1-[2-[[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-, methyl ester, (4S)- (9CI) (CA INDEX NAME)

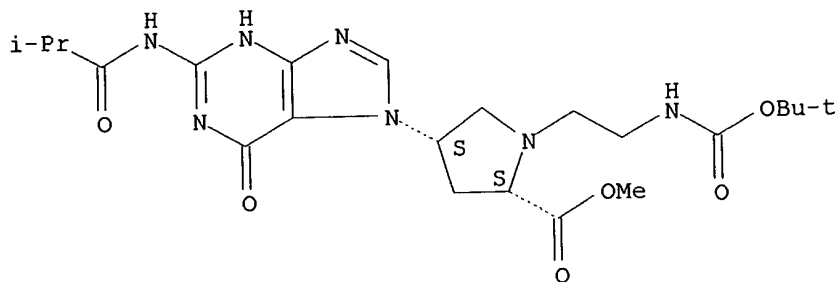
Absolute stereochemistry.



IT 340961-35-5P 340961-37-7P 340961-38-8P
 340961-39-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and hybridization studies of mixed base PNAs contg.
 aminoethylprolyl backbone monomers)

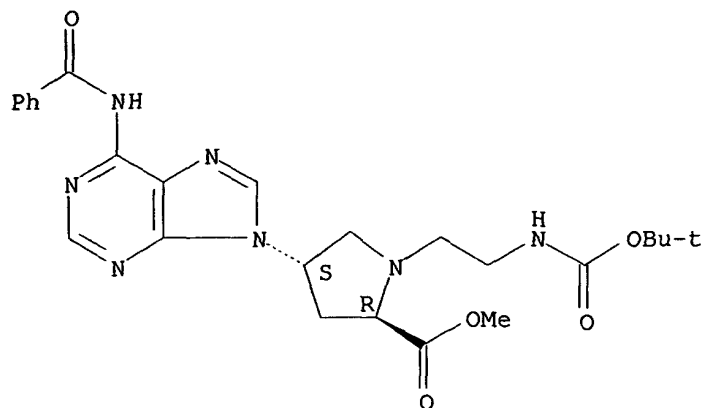
RN 340961-35-5 HCAPLUS
 CN L-Proline, 4-[1,6-dihydro-2-[(2-methyl-1-oxopropyl)amino]-6-oxo-7H-purin-7-yl]-1-[2-[[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-, methyl ester, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 340961-37-7 HCAPLUS
 CN D-Proline, 4-[6-(benzoylamino)-9H-purin-9-yl]-1-[2-[[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-, methyl ester, (4S)- (9CI) (CA INDEX NAME)

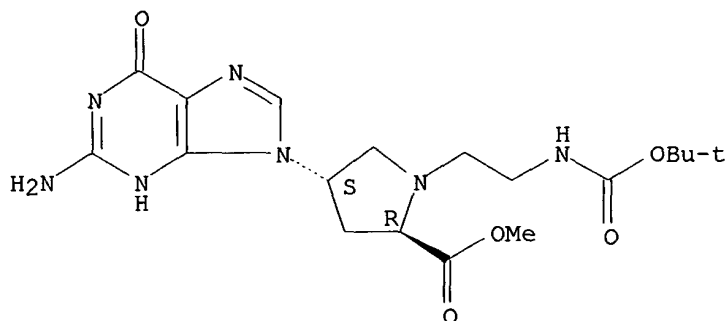
Absolute stereochemistry.



RN 340961-38-8 HCAPLUS

CN D-Proline, 4-((2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)-1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, methyl ester, (4S)- (9CI) (CA INDEX NAME)

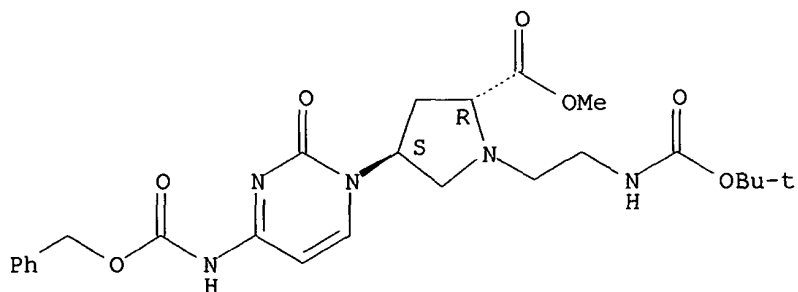
Absolute stereochemistry.



RN 340961-39-9 HCAPLUS

CN D-Proline, 1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-4-[2-oxo-4-[[[(phenylmethoxy)carbonyl]amino]-1(2H)-pyrimidin-2-yl]-, methyl ester, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:844932 HCAPLUS

DOCUMENT NUMBER: 134:147837

TITLE: Synthesis and properties of chiral peptide nucleic acids with a N-aminoethyl-D-proline backbone

AUTHOR(S): Vilaivan, Tirayut; Khongdeesameor, Chanchai; Harnyuttanakorn, Pongchai; Westwell, Martin S.; Lowe, Gordon

CORPORATE SOURCE: Organic Synthesis Research Unit, Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok, 10330, Thailand

SOURCE: Bioorganic & Medicinal Chemistry Letters (2000), 10(22), 2541-2545

CODEN: BMCLE8; ISSN: 0960-894X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:147837

AB A synthon of D-proline substituted at the 4-position by thymine and at N by a flexible aminoethyl linker, has been used to prep. a novel chiral peptide nucleic acid (cPNA) with (2R,4R) stereochem. using solid phase methodol. The homothymine decamer cPNA binds to complementary polyadenylic acid to form 2:1 hybrid with high affinity and specificity according to UV and CD studies, whereas no binding to the corresponding polydeoxyadenylic acid was obsd.

IT 318515-52-5P 318515-53-6P 318515-54-7P 318515-55-8P

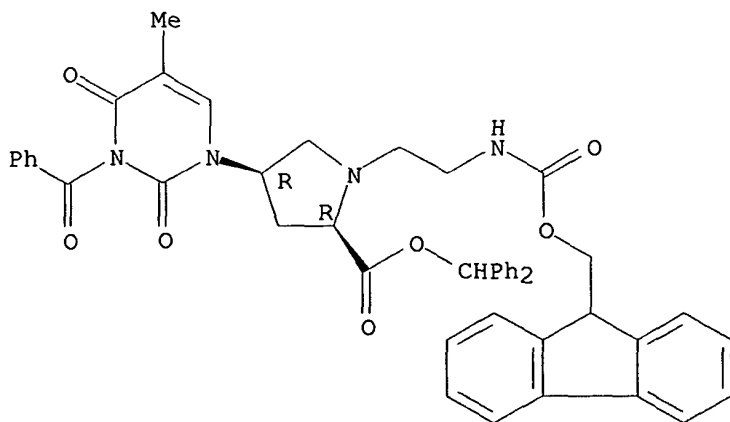
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(solid phase synthesis and properties of chiral peptide nucleic acids with a aminoethylproline backbone)

RN 318515-52-5 HCAPLUS

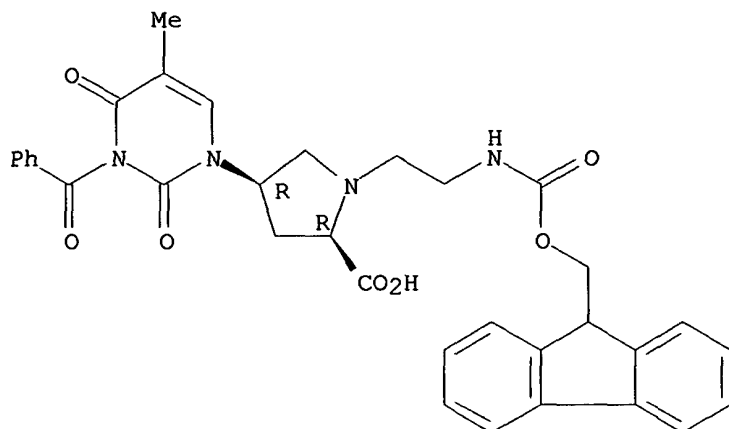
CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[(9H-fluoren-9-ylmethoxy)carbonyl]amino]ethyl]-, diphenylmethyl ester, (4R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 318515-53-6 HCAPLUS
 CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-
 1-[2-[(9H-fluoren-9-ylmethoxy)carbonyl]amino]ethyl]-, monohydrochloride,
 (4R)-(9CI) (CA INDEX NAME)

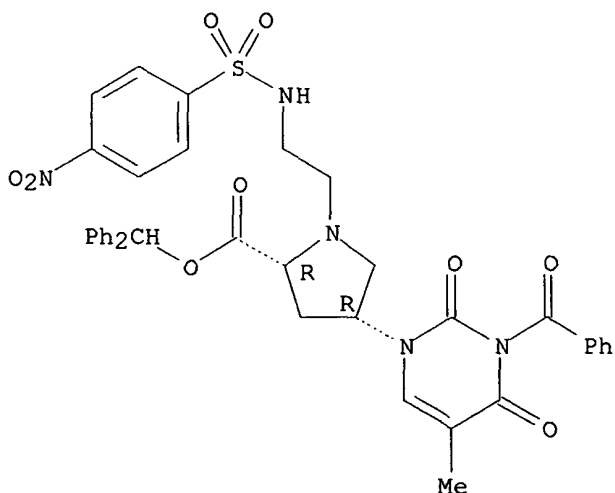
Absolute stereochemistry. Rotation (+).



● HCl

RN 318515-54-7 HCAPLUS
 CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-
 1-[2-[(4-nitrophenyl)sulfonyl]amino]ethyl]-, diphenylmethyl ester, (4R)-
 (9CI) (CA INDEX NAME)

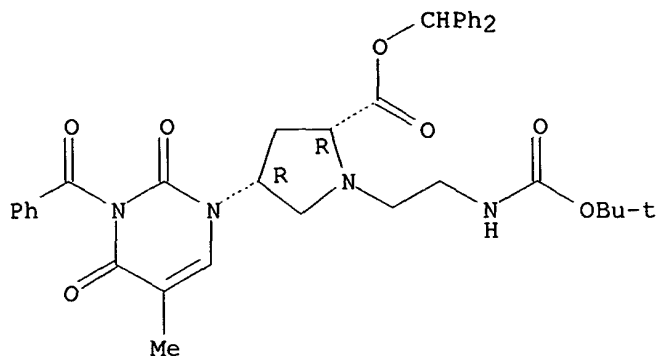
Absolute stereochemistry.



RN 318515-55-8 HCAPLUS

CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, diphenylmethyl ester, (4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



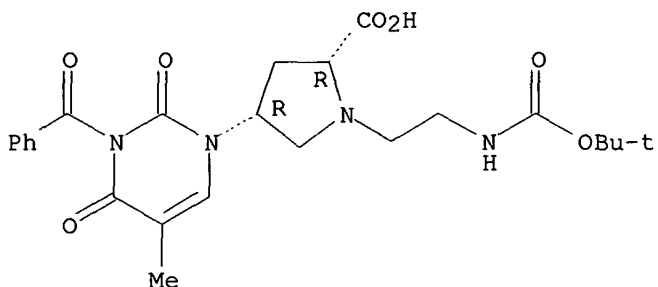
IT 318515-56-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(solid phase synthesis and properties of chiral peptide nucleic acids with a aminoethylproline backbone)

RN 318515-56-9 HCAPLUS

CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:663052 HCAPLUS

DOCUMENT NUMBER: 132:251401

TITLE: Aminoethylprolyl Peptide Nucleic Acids (aepPNA):
Chiral PNA Analogues That Form Highly Stable
DNA:aepPNA2 Triplexes

AUTHOR(S): D'Costa, Moneesha; Kumar, Vaijayanti A.; Ganesh, Krishna N.

CORPORATE SOURCE: Division of Organic Chemistry (Synthesis), National
Chemical Laboratory, Pune, 411008, India

SOURCE: Organic Letters (1999), 1(10), 1513-1516
 CODEN: ORLEF7; ISSN: 1523-7060
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The replacement of the glycyl component in the peptide nucleic acid (PNA) backbone by a prolyl unit bearing a nucleobase leads to the aminoethylprolyl (aep) PNAs, which are chiral and cationic. The homo-oligomeric aepPNA binds to complementary DNA sequences with high affinity and sequence specificity, forming highly stable triplexes.

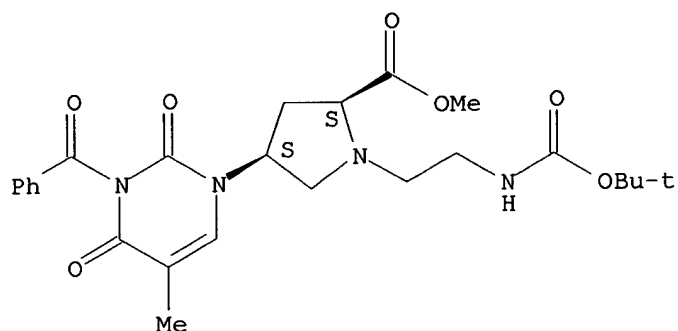
IT 253307-69-6P 253307-71-0P 253307-74-3P
 253307-76-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction of in the synthesis of aminoethylprolyl peptide nucleic acids)

RN 253307-69-6 HCAPLUS

CN L-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-, methyl ester, (4S)-(9CI) (CA INDEX NAME)

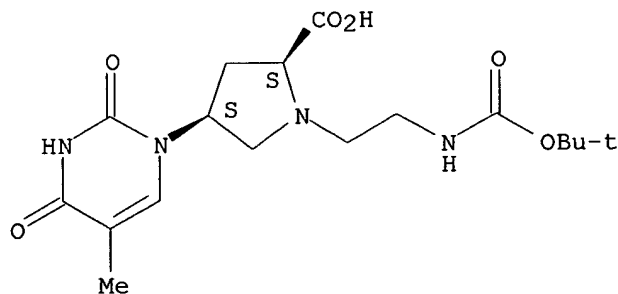
Absolute stereochemistry.



RN 253307-71-0 HCAPLUS

CN L-Proline, 4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[[1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

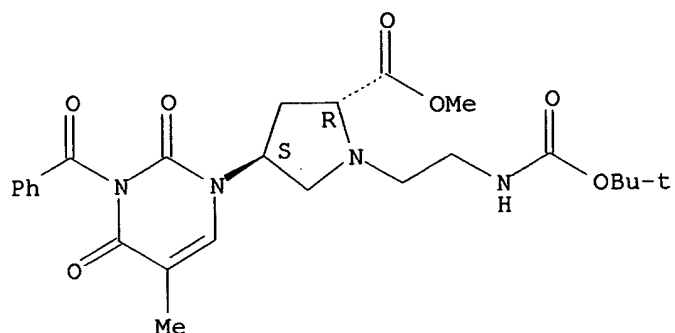


RN 253307-74-3 HCAPLUS

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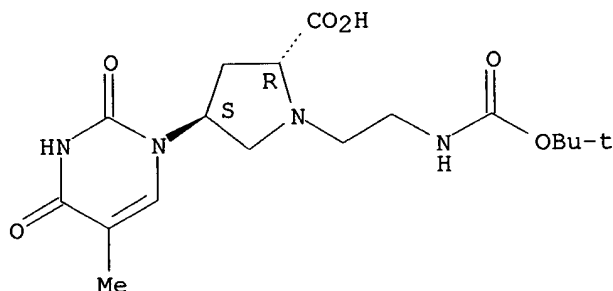
1-[2-[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, methyl ester, (4S)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 253307-76-5 HCAPLUS
CN D-Proline, 4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-
[[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 262614-79-9P 262614-81-3P 262615-03-2P
262615-29-2P 262615-33-8P 262615-36-1P
262615-38-3P 262615-58-7P 262615-78-1P
262615-79-2P 262615-84-9P 262615-88-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and triplex stability of)
RN 262614-79-9 HCAPLUS
CN DNA, d(G-C-A-A-A-A-A-A-A-A-C-G), complex with peptide nucleic acid
(H-T-T-T-T-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-
1(2H)-pyrimidinyl)-D-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-13-9
CMF Unspecified
CCI MAN
CDES NS

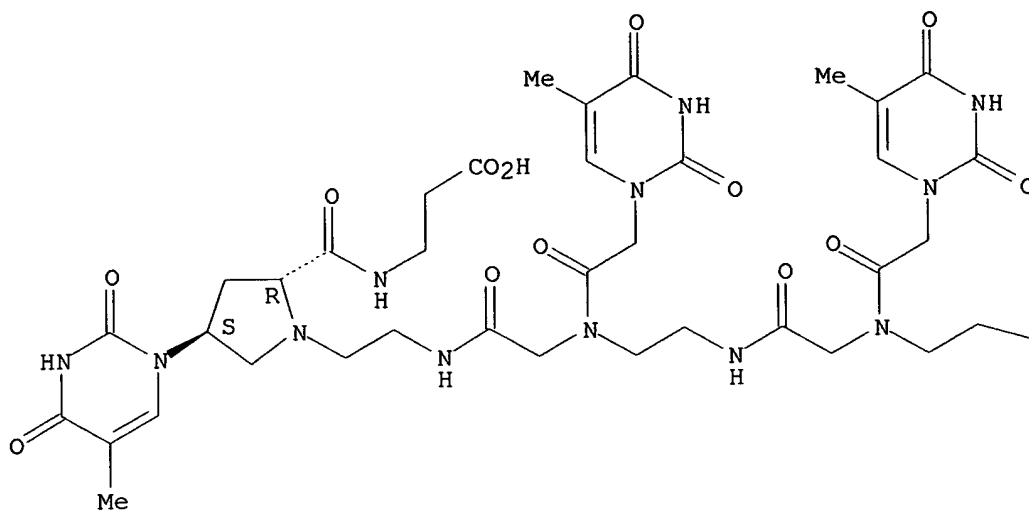
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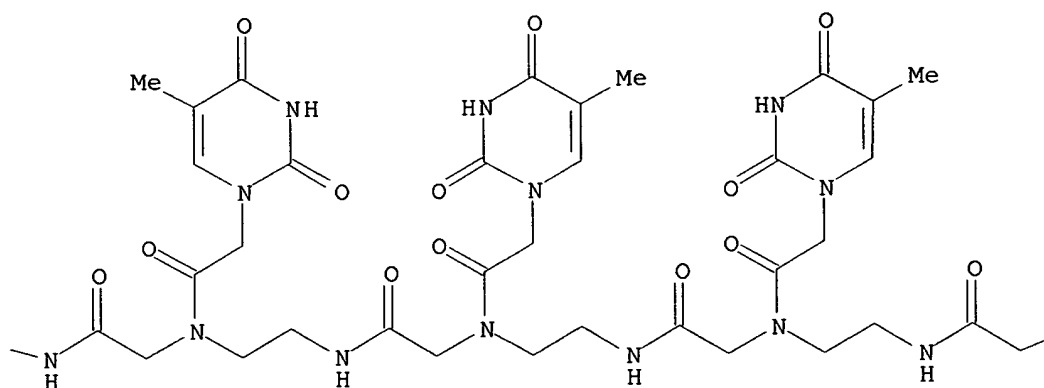
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CMF C92 H121 N33 O33

Absolute stereochemistry.

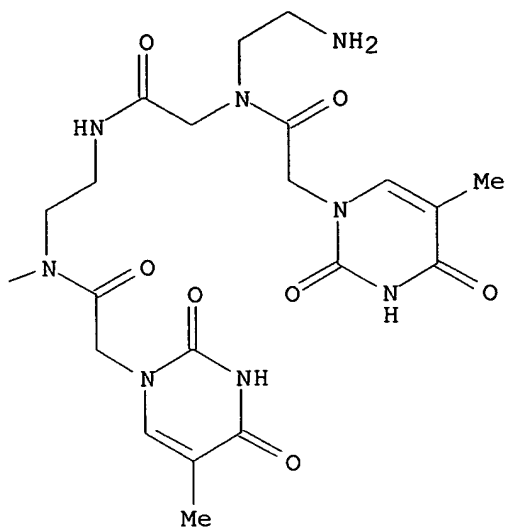
PAGE 1-A



PAGE 1-B



PAGE 1-C



RN 262614-81-3 HCAPLUS
 CN DNA, d(G-C-A-A-A-A-A-A-A-A-C-G), complex with peptide nucleic acid
 (H-T-T-T-T-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-
 1(2H)-pyrimidinyl)-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-13-9
 CMF Unspecified
 CCI MAN
 CDES NS

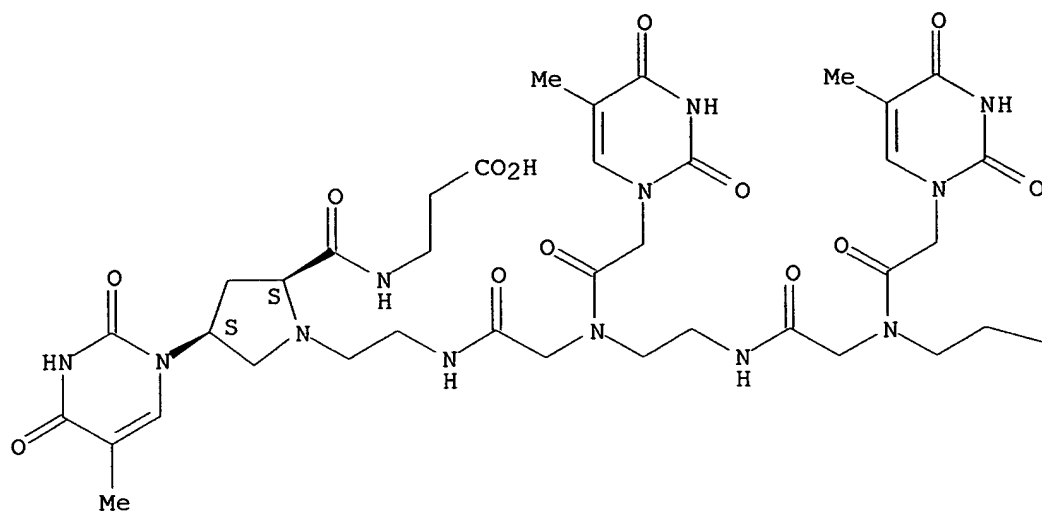
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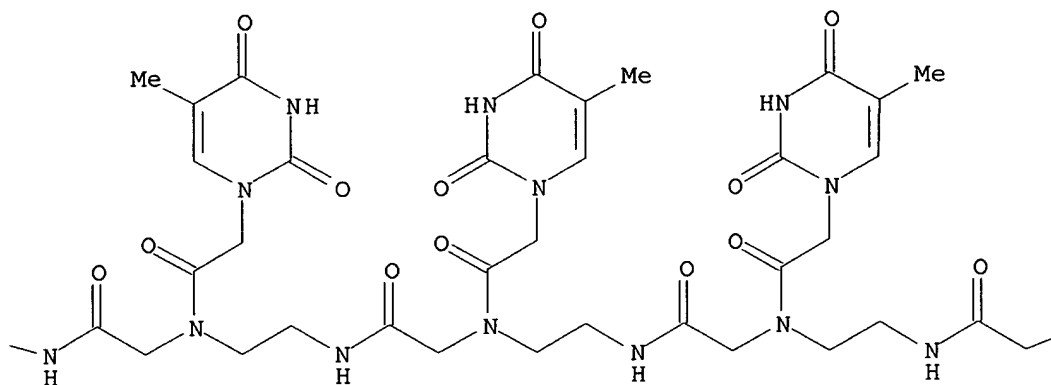
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Absolute stereochemistry.

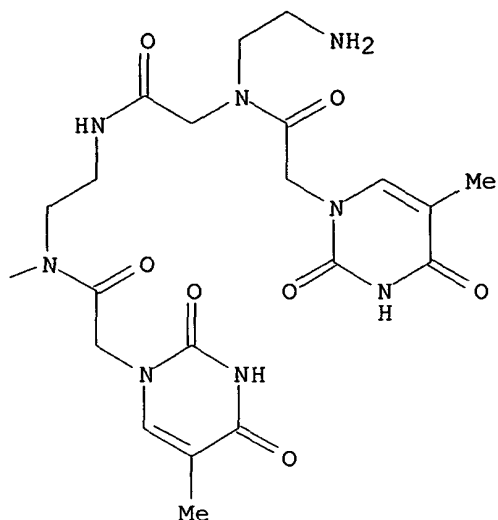
PAGE 1-A



PAGE 1-B



PAGE 1-C



RN 262615-03-2 HCAPLUS

CN DNA, d(G-C-A-A-A-A-A-A-A-C-G), complex with peptide nucleic acid
 (H-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
 pyrimidinyl)-D-Pro-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-
 dioxo-1(2H)-pyrimidinyl)-D-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-13-9

CMF Unspecified

CCI MAN

CDES NS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

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CRN 253307-82-3

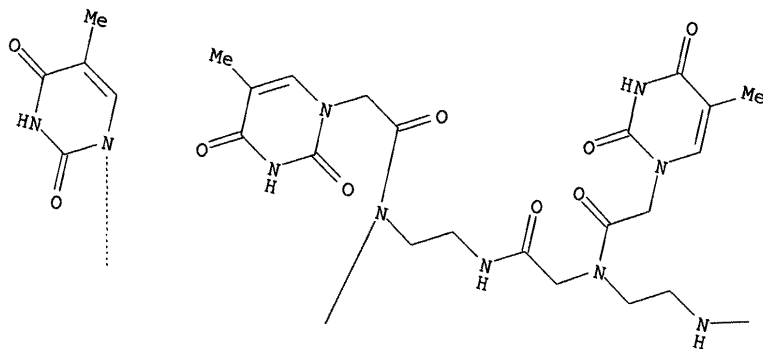
CMF C93 H123 N33 O32

Absolute stereochemistry.

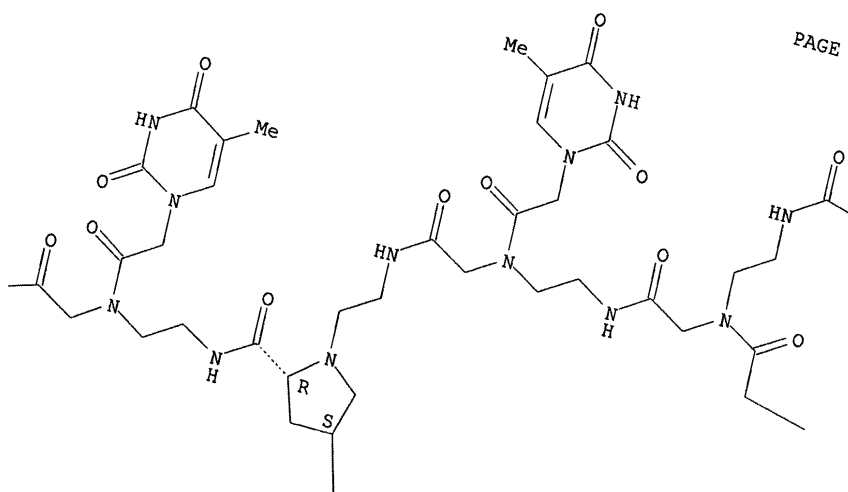
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July 17, 2002

PAGE 1-A

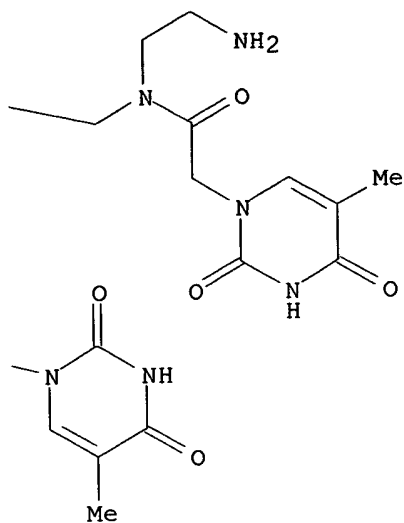


PAGE 1-B

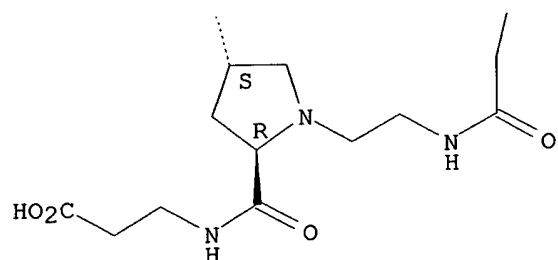


Searched by Paul Schulwitz (703) 305-1954

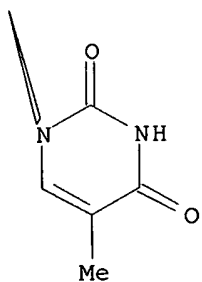
PAGE 1-C



PAGE 2-A



PAGE 2-B



RN 262615-29-2 HCAPLUS
 CN DNA, d(G-C-A-A-A-A-A-A-A-A-C-G), complex with peptide nucleic acid
 (H-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
 pyrimidinyl)-Pro-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-

dioxo-1(2H)-pyrimidinyl)-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-13-9

CMF Unspecified

CCI MAN

CDES NS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

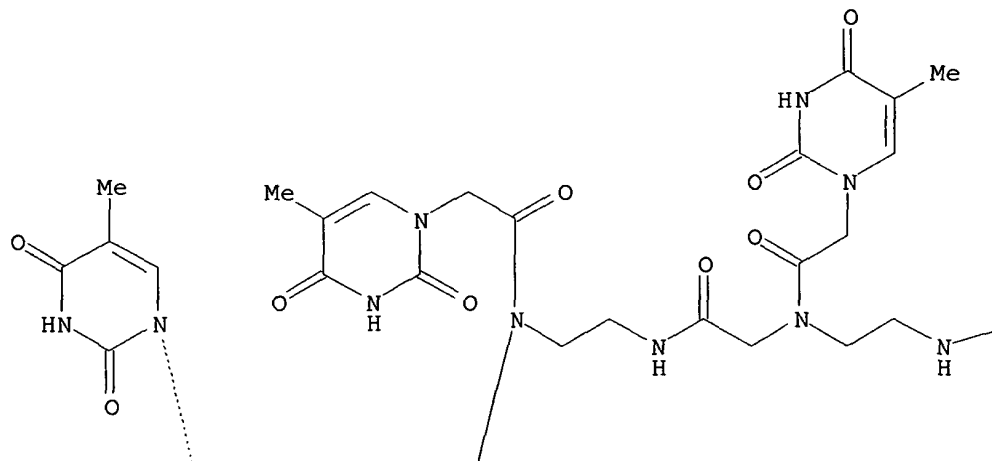
CM 2

CRN 253307-84-5

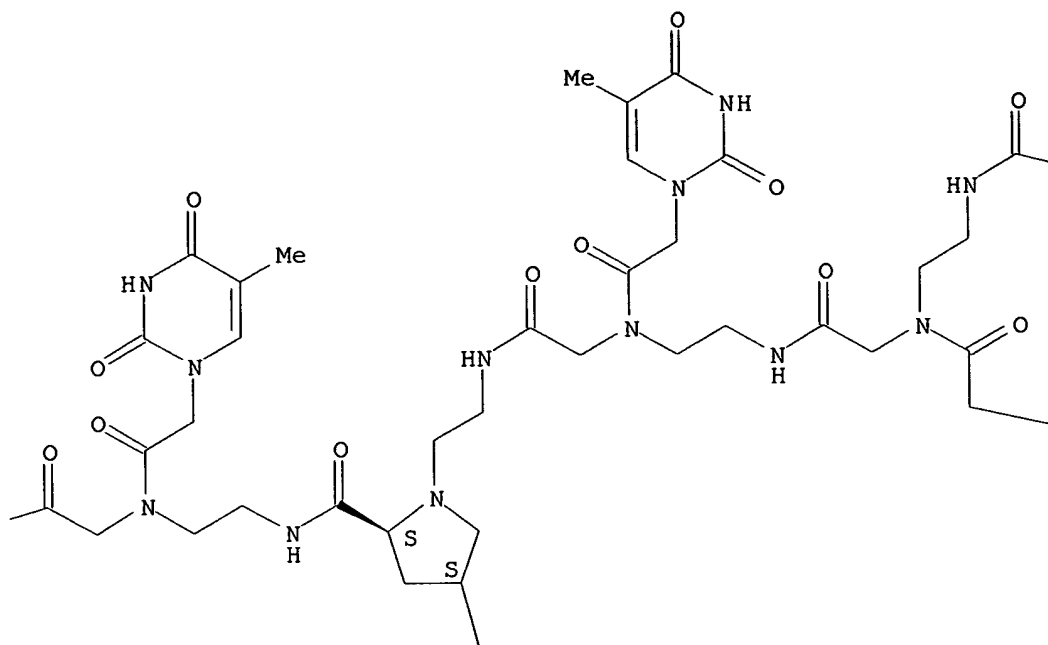
CMF C93 H123 N33 O32

Absolute stereochemistry.

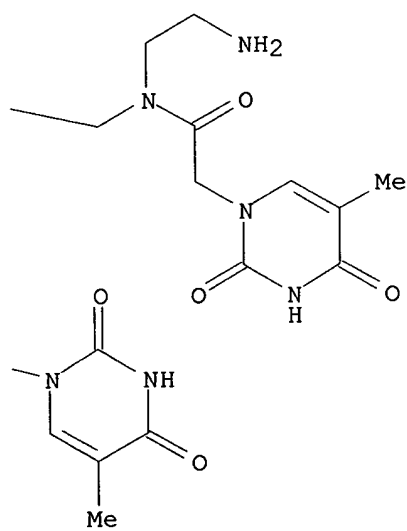
PAGE 1-A



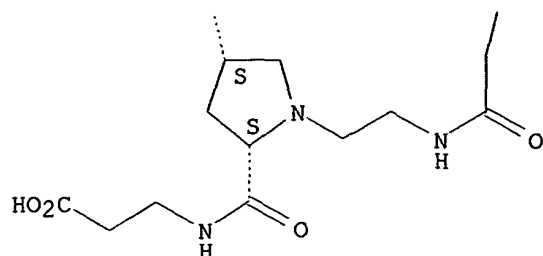
PAGE 1-B



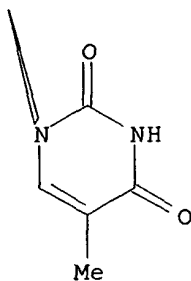
PAGE 1-C



PAGE 2-A



PAGE 2-B



RN 262615-33-8 HCAPLUS
 CN DNA, d(G-C-A-A-A-A-A-A-A-C-G), complex with peptide nucleic acid
 (H-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
 pyrimidinyl)-D-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-
 dioxo-1(2H)-pyrimidinyl)-D-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-
 methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-
 dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro)-Bal-OH (1:2) (9CI)
 (CA INDEX NAME)

CM 1

CRN 262408-13-9
 CMF Unspecified
 CCI MAN
 CDES NS

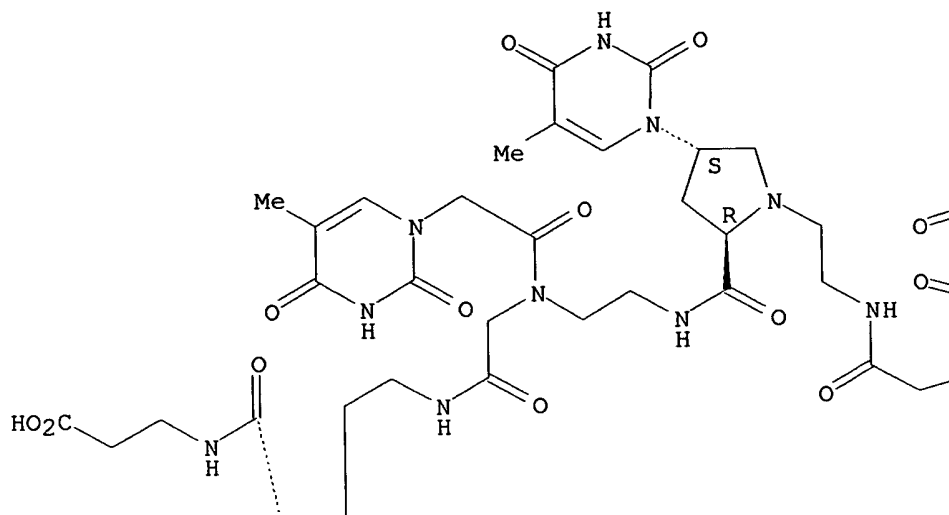
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

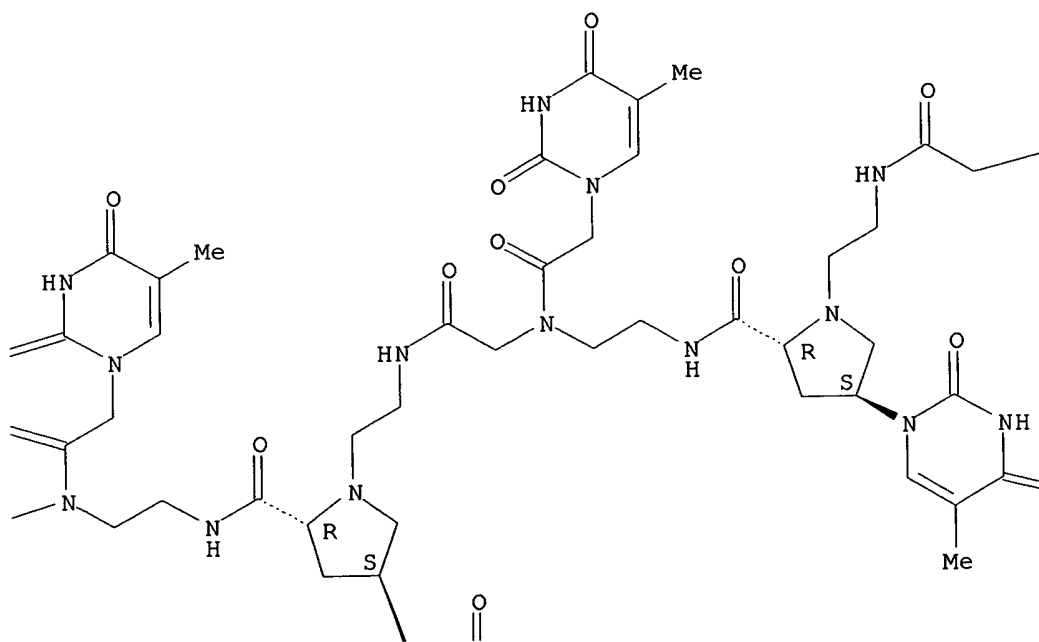
CRN 253342-10-8
 CMF C95 H127 N33 O30

Absolute stereochemistry.

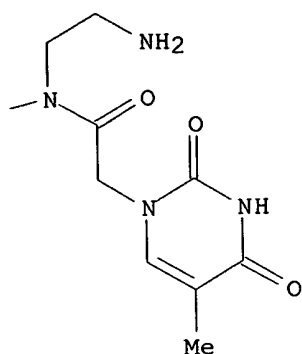
PAGE 1-A



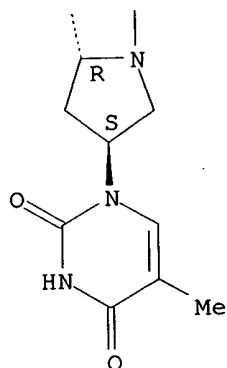
PAGE 1-B



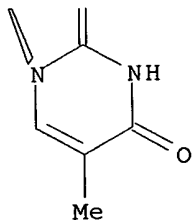
PAGE 1-C



PAGE 2-A



PAGE 2-B



RN 262615-36-1 HCAPLUS
 CN DNA, d(G-C-A-A-A-A-A-A-A-C-G), complex with peptide nucleic acid
 (H-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
 pyrimidinyl)-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-

1(2H)-pyrimidinyl)-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-13-9

CMF Unspecified

CCI MAN

CDES NS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

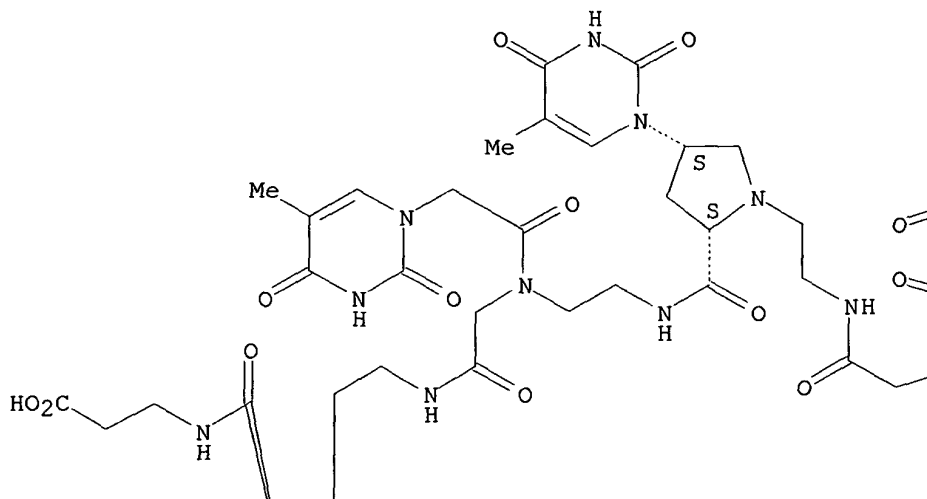
CM 2

CRN 253342-11-9

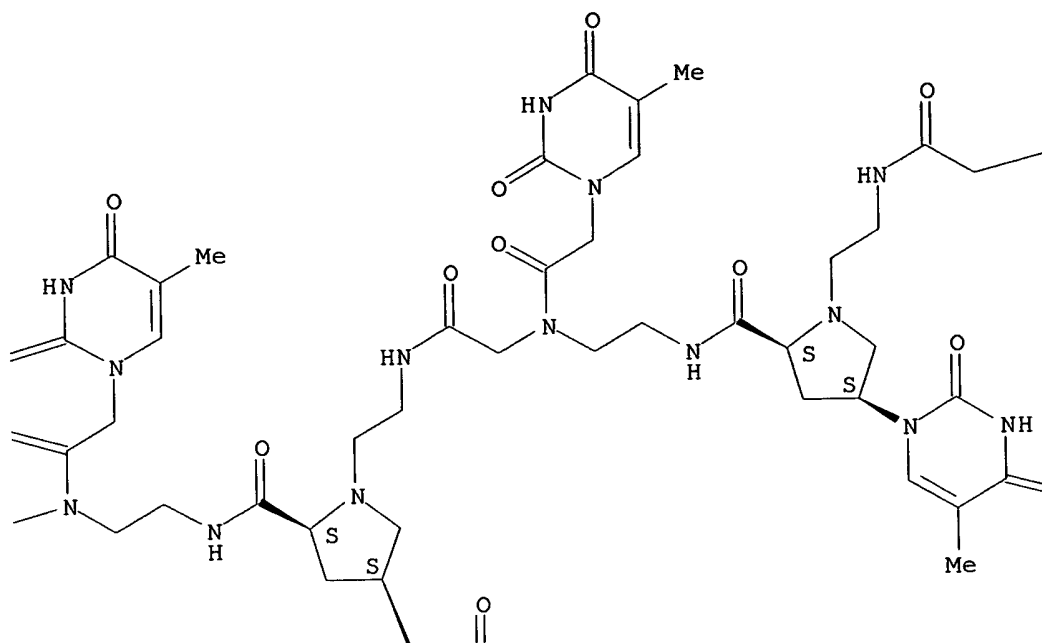
CMF C95 H127 N33 O30

Absolute stereochemistry.

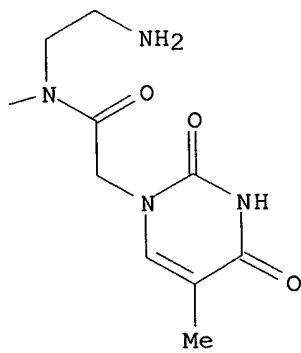
PAGE 1-A



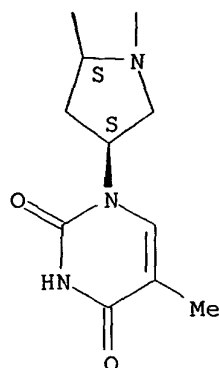
PAGE 1-B



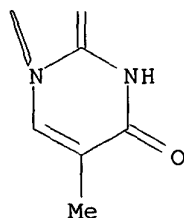
PAGE 1-C



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PAGE 2-B



RN 262615-38-3 HCAPLUS
 CN DNA, d(G-C-A-A-A-A-A-A-C-G), complex with peptide nucleic acid
 (H-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
 pyrimidinyl)-D-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-
 dioxo-1(2H)-pyrimidinyl)-D-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-
 methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-
 dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-(4S)-1-(2-aminoethyl)-
 4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-(4S)-1-(2-
 aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-
 (4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-
 D-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-13-9
 CMF Unspecified
 CCI MAN
 CDES NS

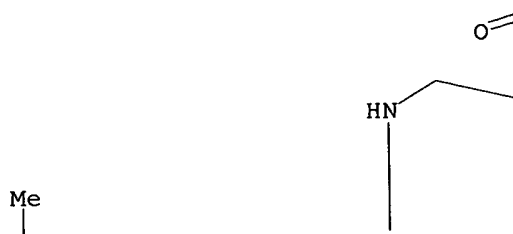
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CM 2

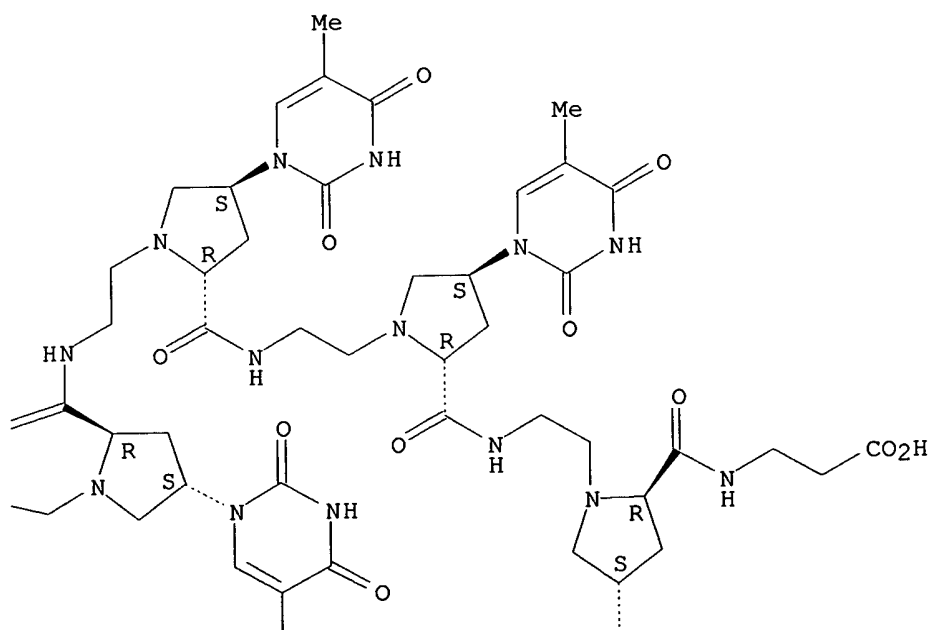
CRN 253342-12-0
 CMF C99 H135 N33 O26

Absolute stereochemistry.

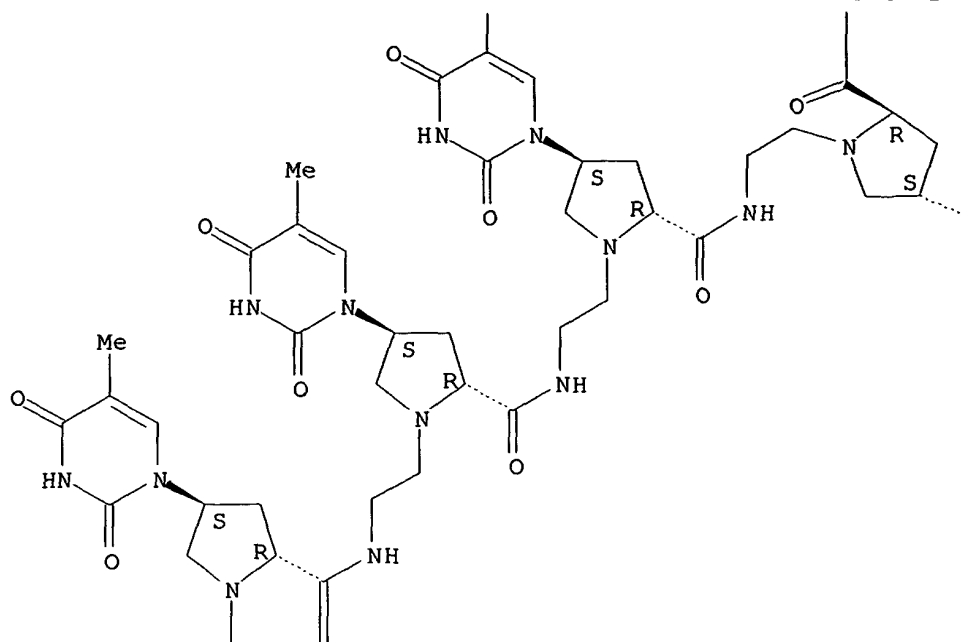
PAGE 1-A



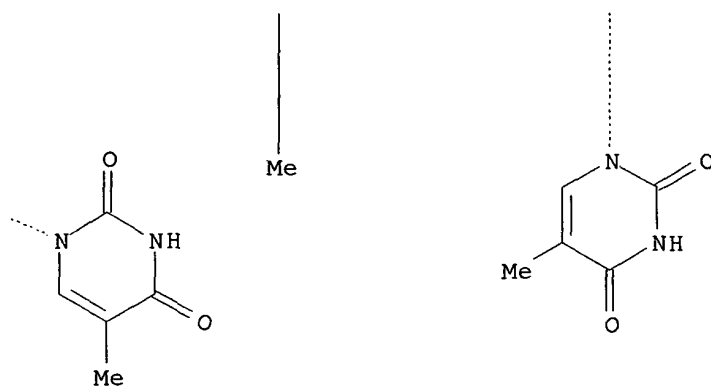
PAGE 1-B



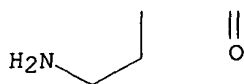
PAGE 2-A



PAGE 2-B



PAGE 3-A



RN 262615-58-7 HCAPLUS
 CN DNA, d(G-C-A-A-A-A-A-A-A-A-C-G), complex with peptide nucleic acid
 (H-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
 pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-

1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-13-9

CMF Unspecified

CCI MAN

CDES NS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

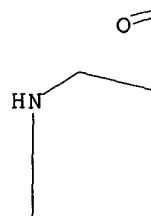
CRN 253342-13-1

CMF C99 H135 N33 O26

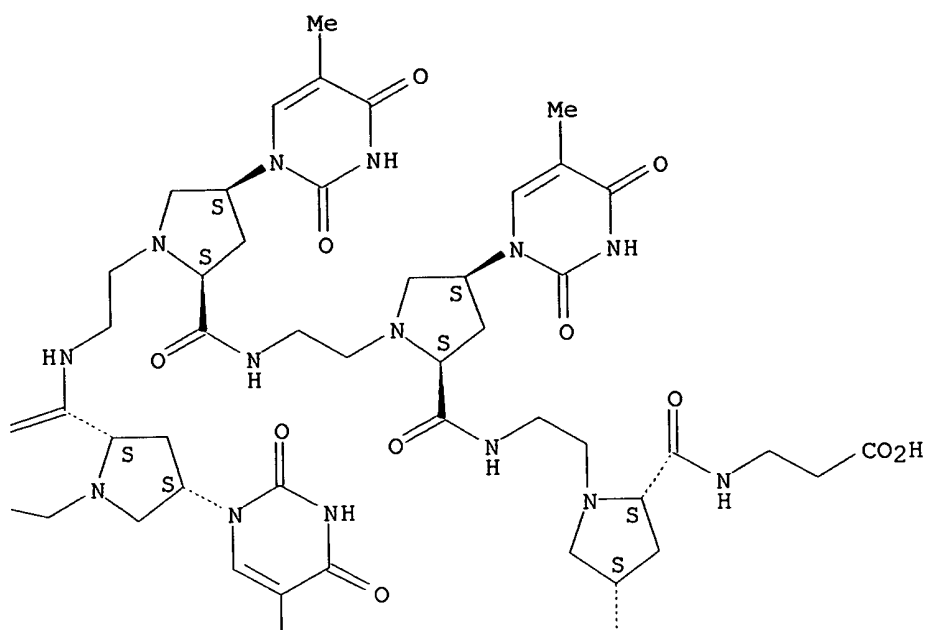
Absolute stereochemistry.

PAGE 1-A

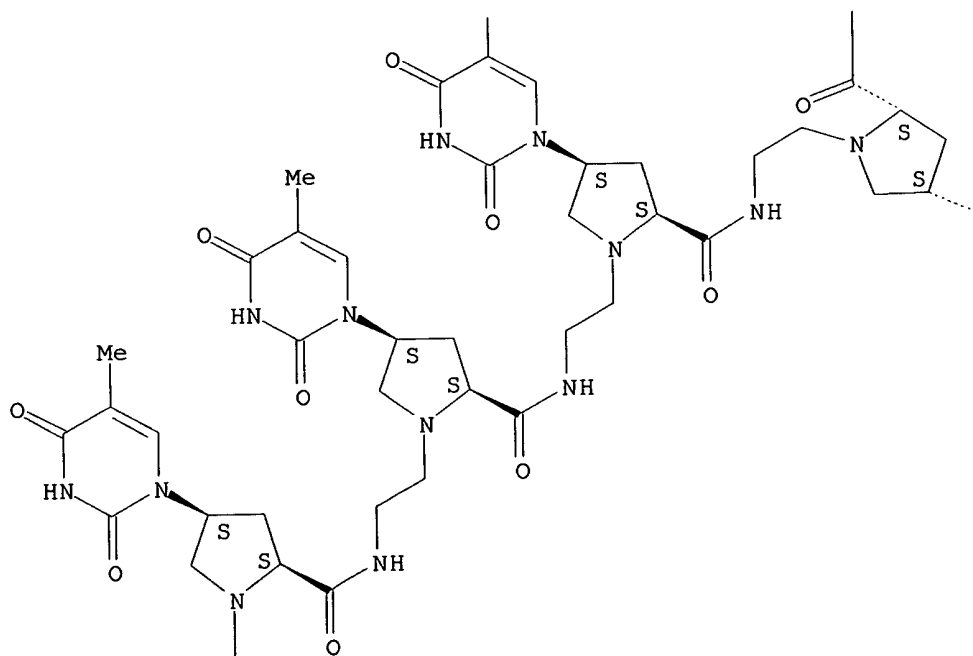
Me
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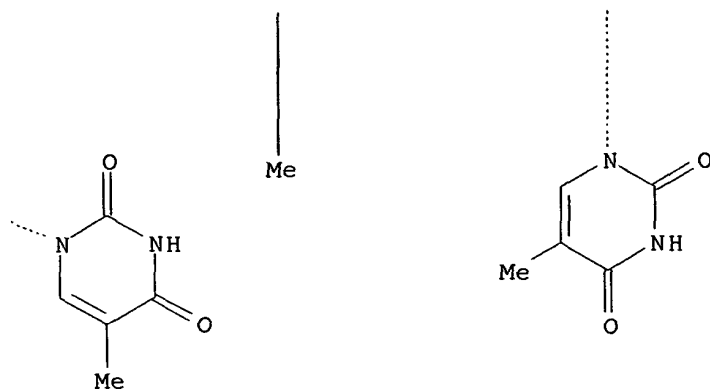
PAGE 1-B



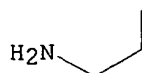
PAGE 2-A



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RN 262615-78-1 HCAPLUS
 CN DNA, d(G-C-A-A-A-T-A-A-A-A-C-G), complex with peptide nucleic acid
 (H-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
 pyrimidinyl)-D-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-
 dioxo-1(2H)-pyrimidinyl)-D-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-
 methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-
 dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro)-Bal-OH (1:2) (9CI)
 (CA INDEX NAME)

CM 1

CRN 262408-14-0

CMF Unspecified

CCI MAN

CDES NS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

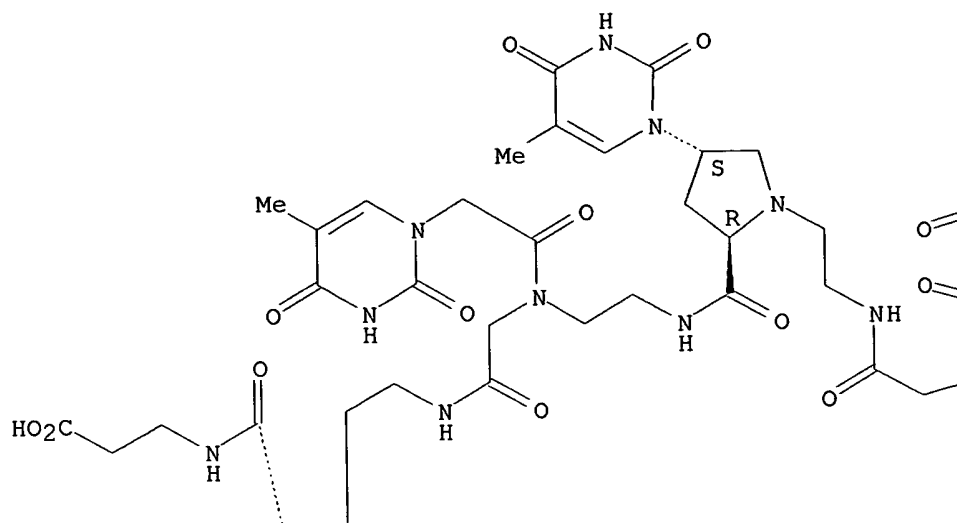
CM 2

CRN 253342-10-8

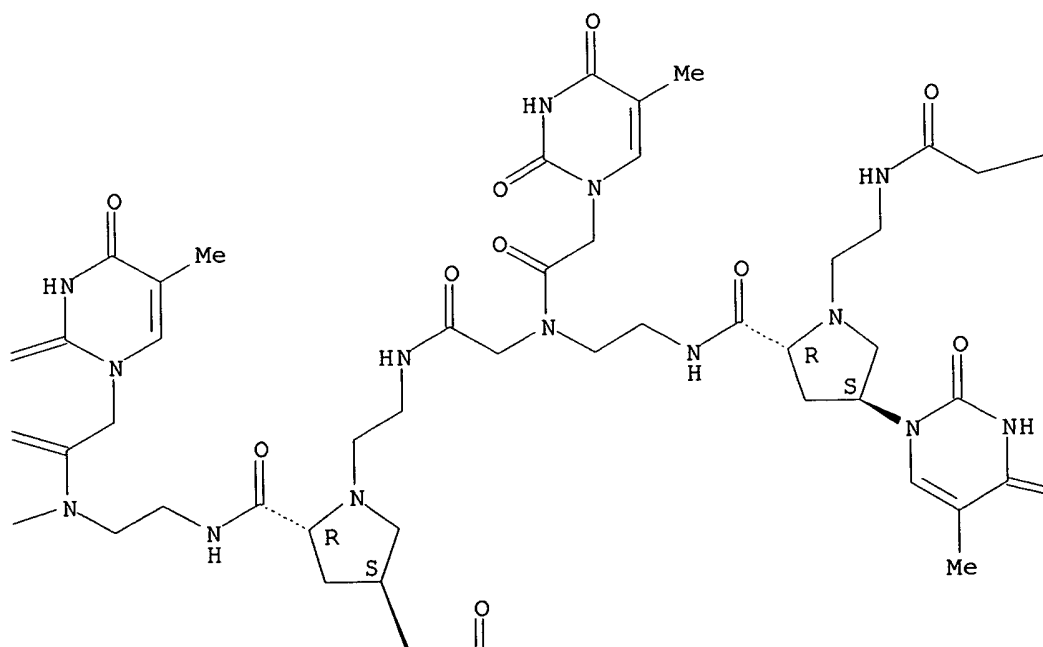
CMF C95 H127 N33 O30

Absolute stereochemistry.

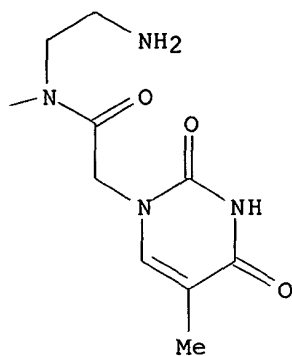
PAGE 1-A



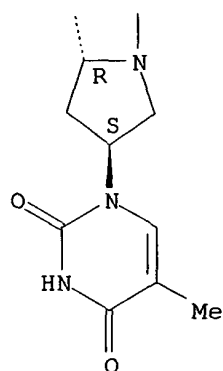
PAGE 1-B



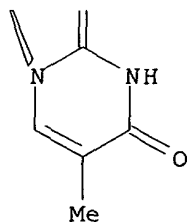
PAGE 1-C



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PAGE 2-B



RN 262615-79-2 HCAPLUS

CN DNA, d(G-C-A-A-T-A-A-A-C-G), complex with peptide nucleic acid
 (H-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
 pyrimidinyl)-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-

1(2H)-pyrimidinyl)-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-14-0

CMF Unspecified

CCI MAN

CDES NS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

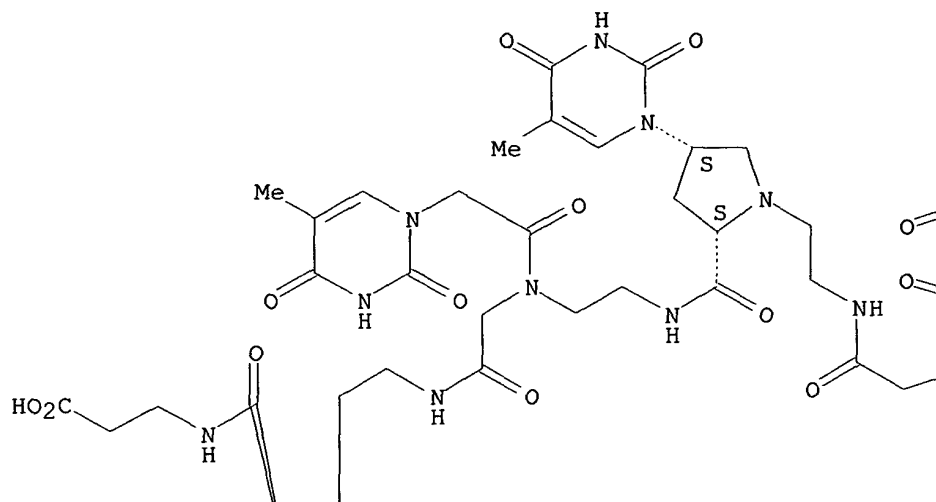
CM 2

CRN 253342-11-9

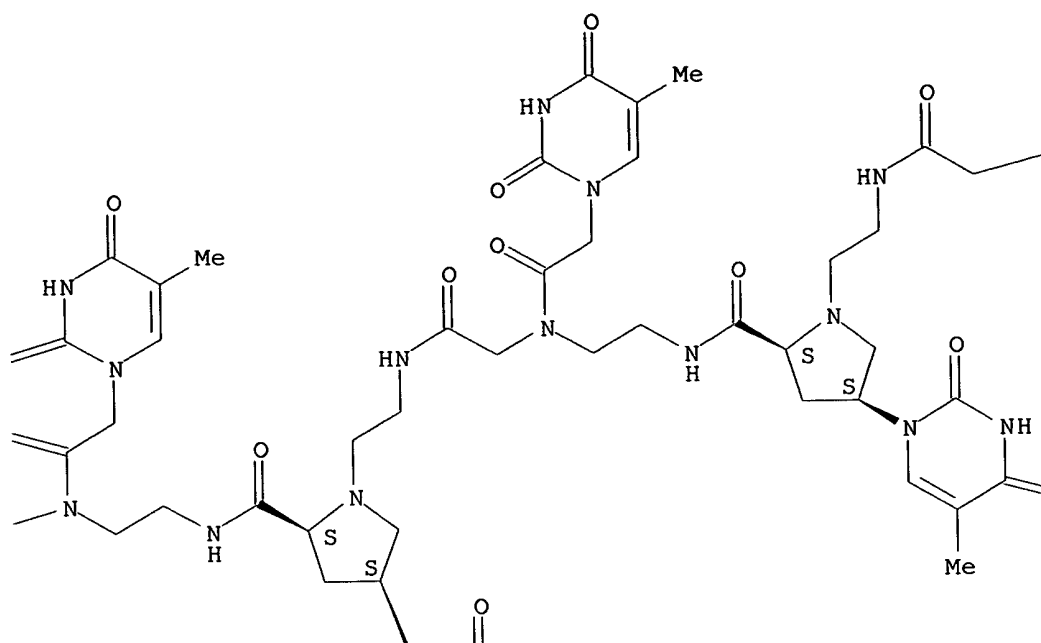
CMF C95 H127 N33 O30

Absolute stereochemistry.

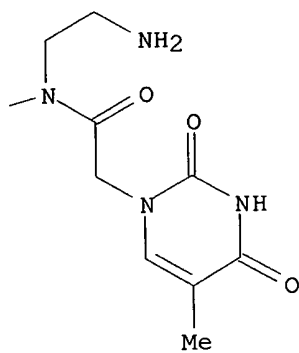
PAGE 1-A



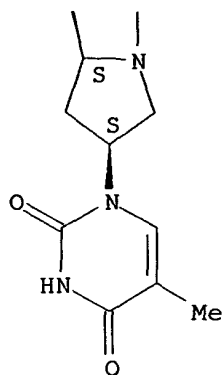
PAGE 1-B



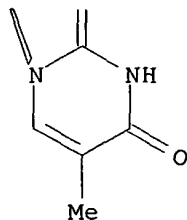
PAGE 1-C



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PAGE 2-B



RN 262615-84-9 HCAPLUS
 CN DNA, d(G-C-A-A-T-A-A-A-C-G), complex with peptide nucleic acid
 (H-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
 pyrimidinyl)-D-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-
 1(2H)-pyrimidinyl)-D-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-
 methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-
 dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-(4S)-1-(2-aminoethyl)-
 4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-(4S)-1-(2-
 aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-
 (4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-
 D-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-14-0

CMF Unspecified

CCI MAN

CDES NS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 253342-12-0

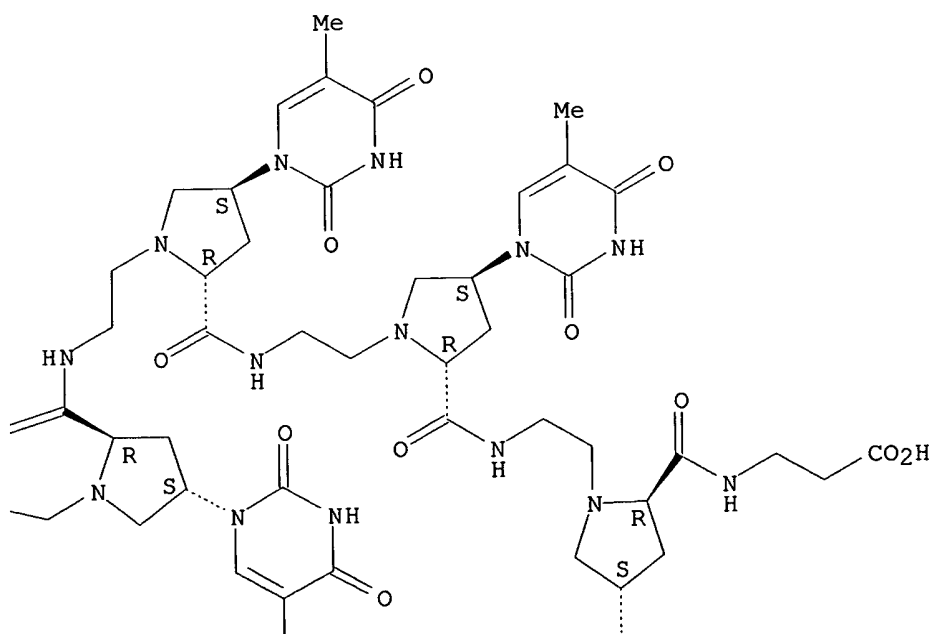
CMF C99 H135 N33 O26

Absolute stereochemistry.

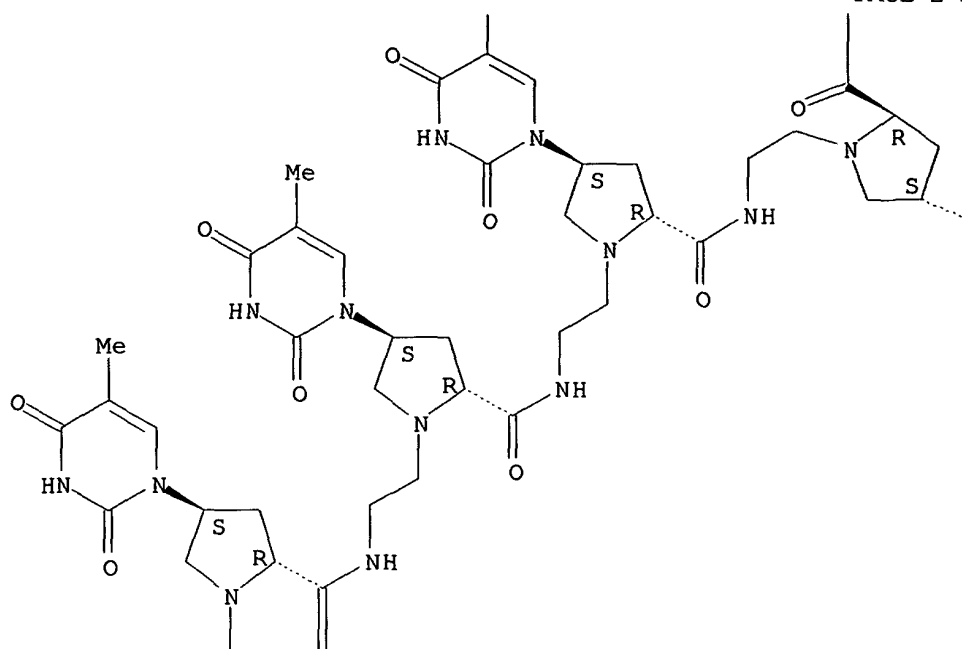
PAGE 1-A



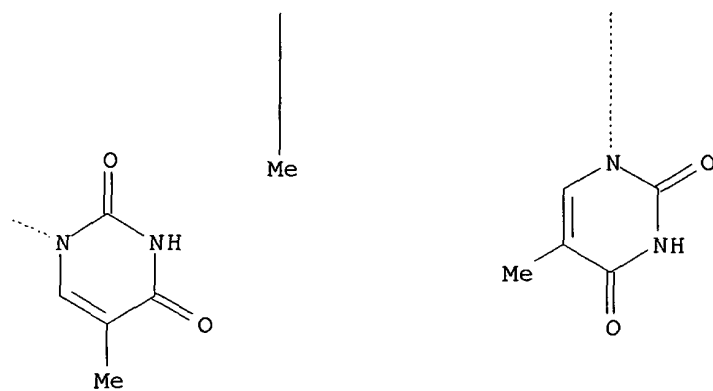
PAGE 1-B



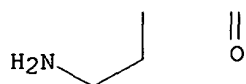
PAGE 2-A



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PAGE 3-A



RN 262615-88-3 HCAPLUS
 CN DNA, d(G-C-A-A-A-T-A-A-A-A-C-G), complex with peptide nucleic acid
 (H-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
 pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-

1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-14-0

CMF Unspecified

CCI MAN

CDES NS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

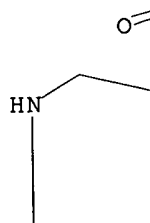
CRN 253342-13-1

CMF C99 H135 N33 O26

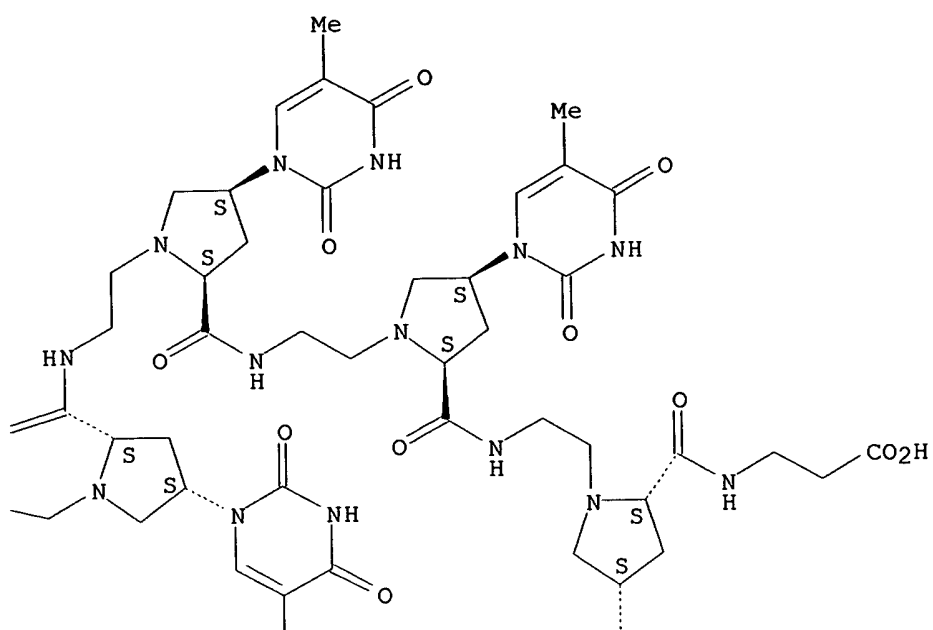
Absolute stereochemistry.

PAGE 1-A

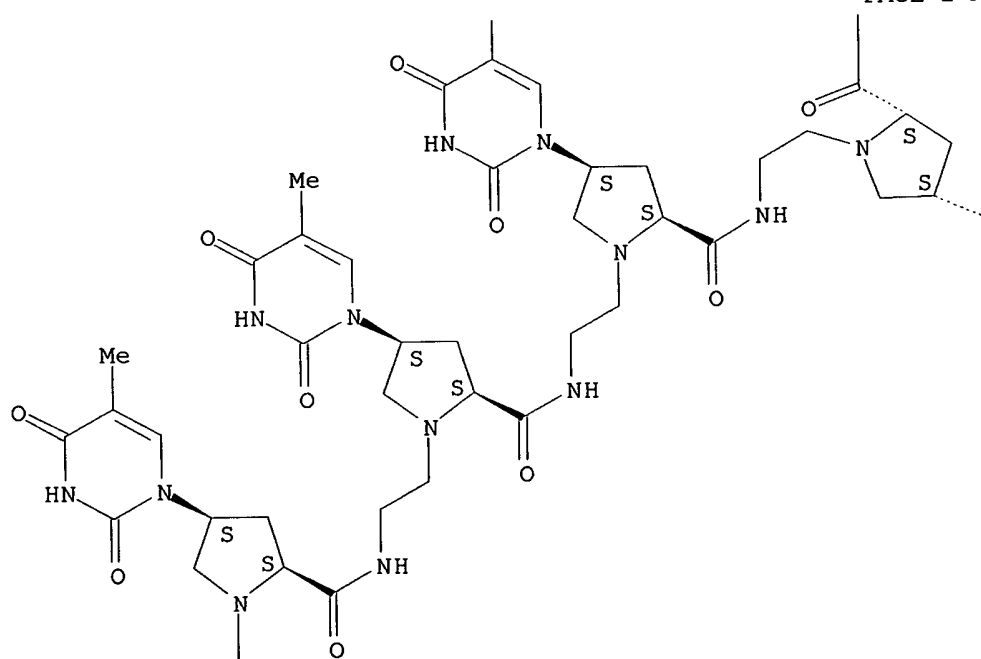
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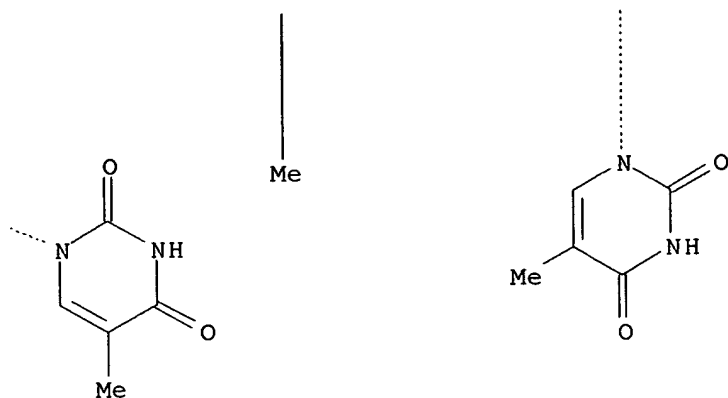
PAGE 1-B



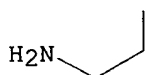
PAGE 2-A



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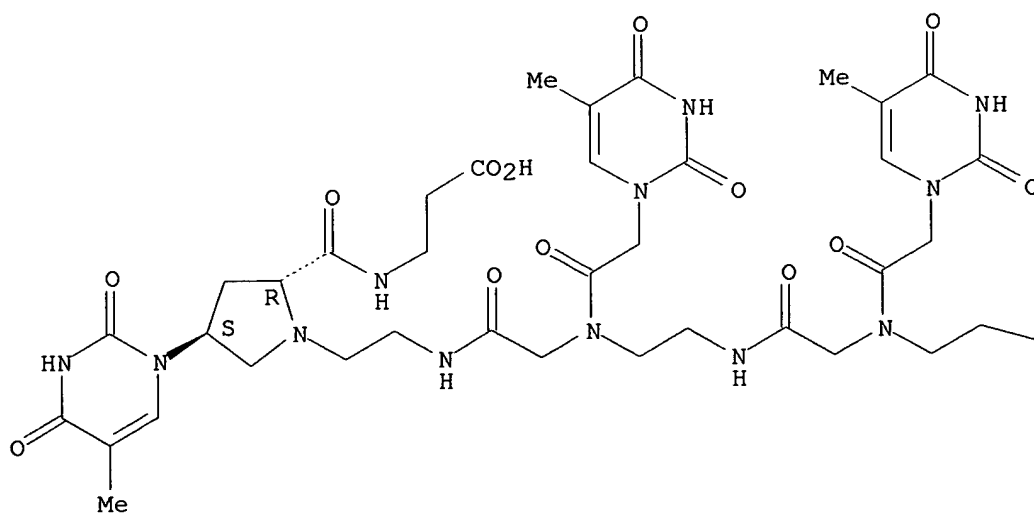
PAGE 3-A



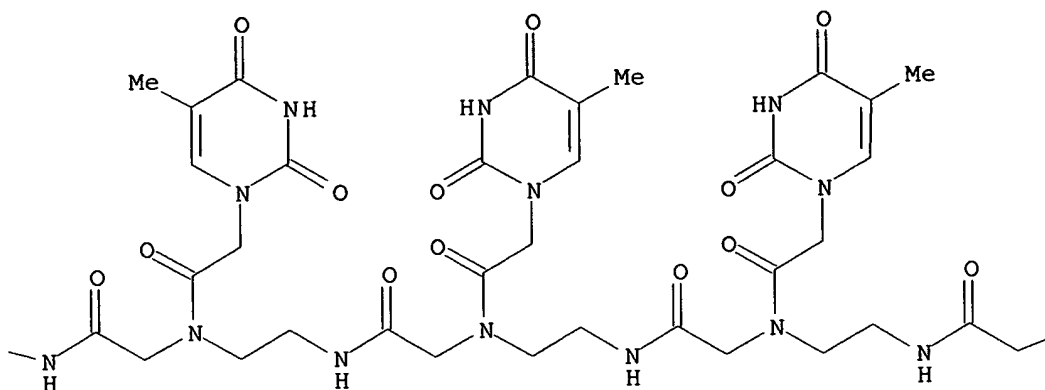
IT 253307-78-7P 253307-80-1P 253307-82-3P
 253307-84-5P 253342-10-8P 253342-11-9P
 253342-12-0P 253342-13-1P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and triplex-forming properties of as chiral PNA analogs)
 RN 253307-78-7 HCAPLUS
 CN Peptide nucleic acid, (H-T-T-T-T-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro)-Bal-OH (9CI) (CA INDEX NAME)

Absolute stereochemistry.

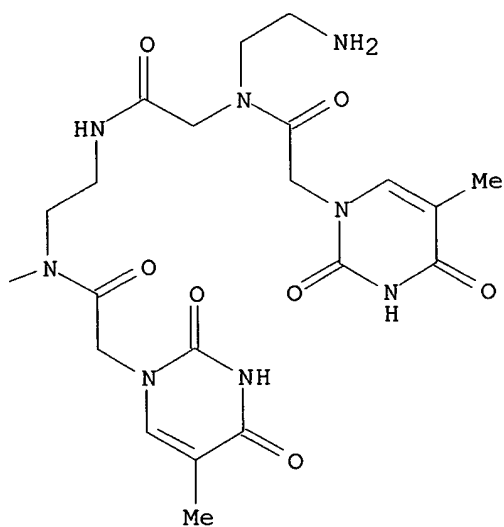
PAGE 1-A



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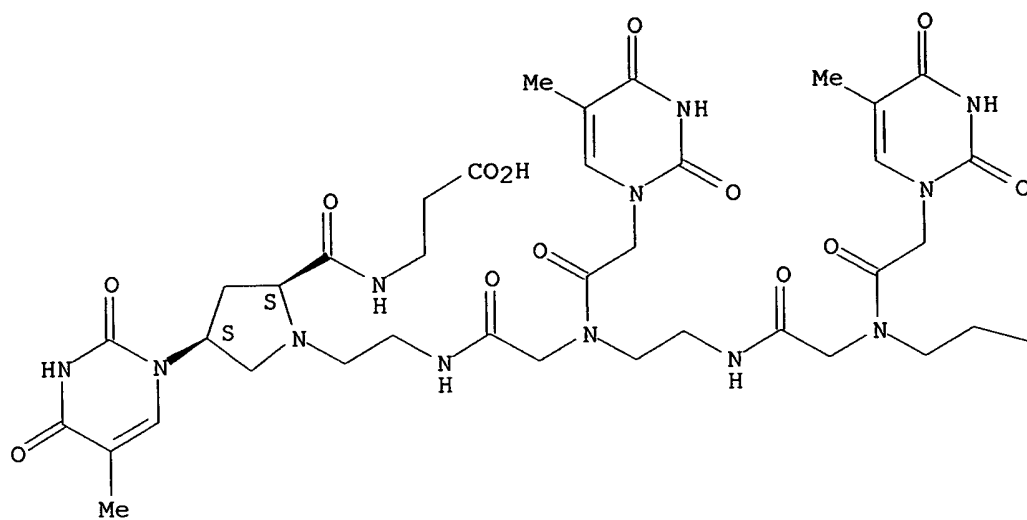


RN 253307-80-1 HCAPLUS

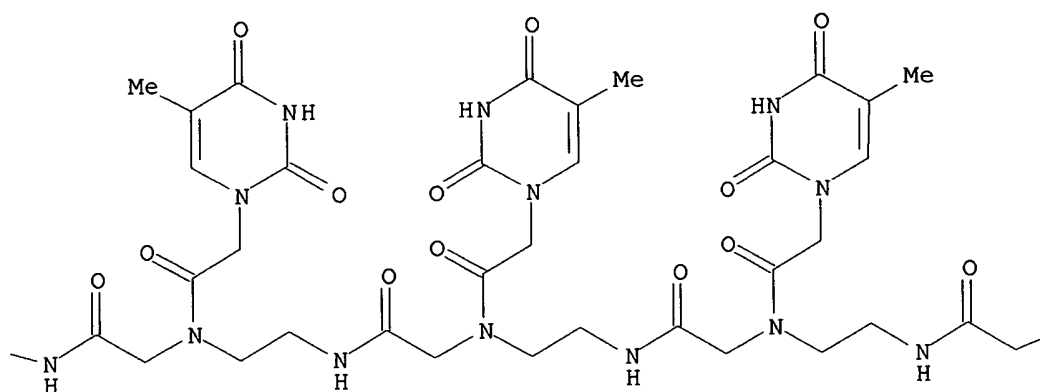
CN Peptide nucleic acid, (H-T-T-T-T-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro)-Bal-OH (9CI) (CA INDEX NAME)

Absolute stereochemistry.

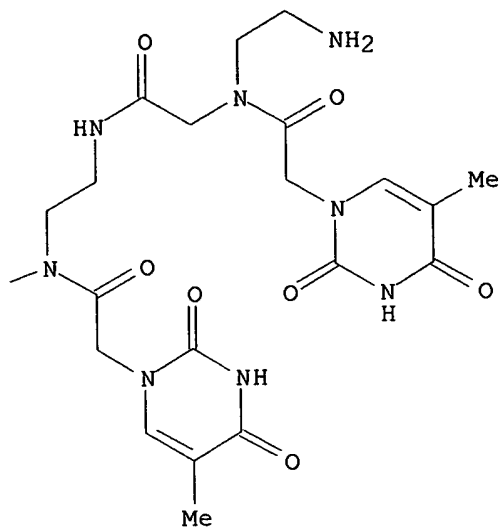
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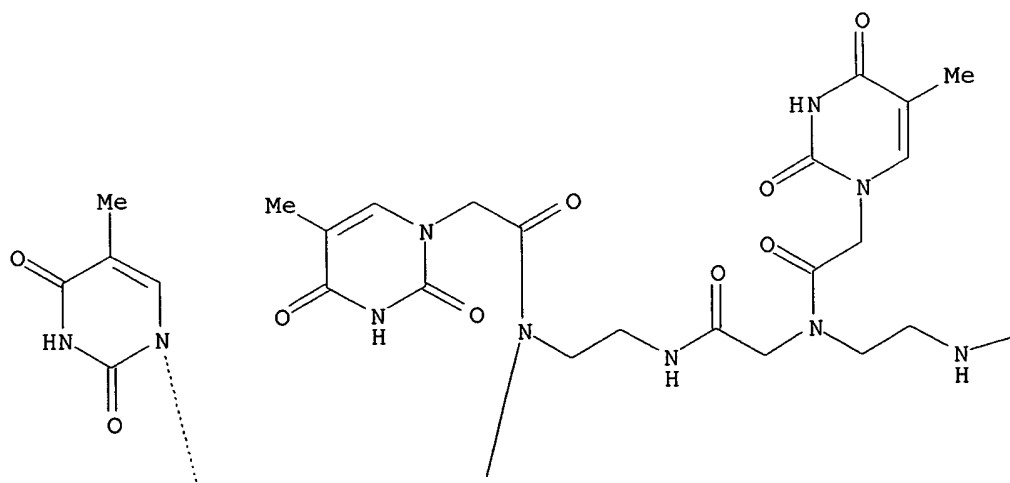


RN 253307-82-3 HCAPLUS

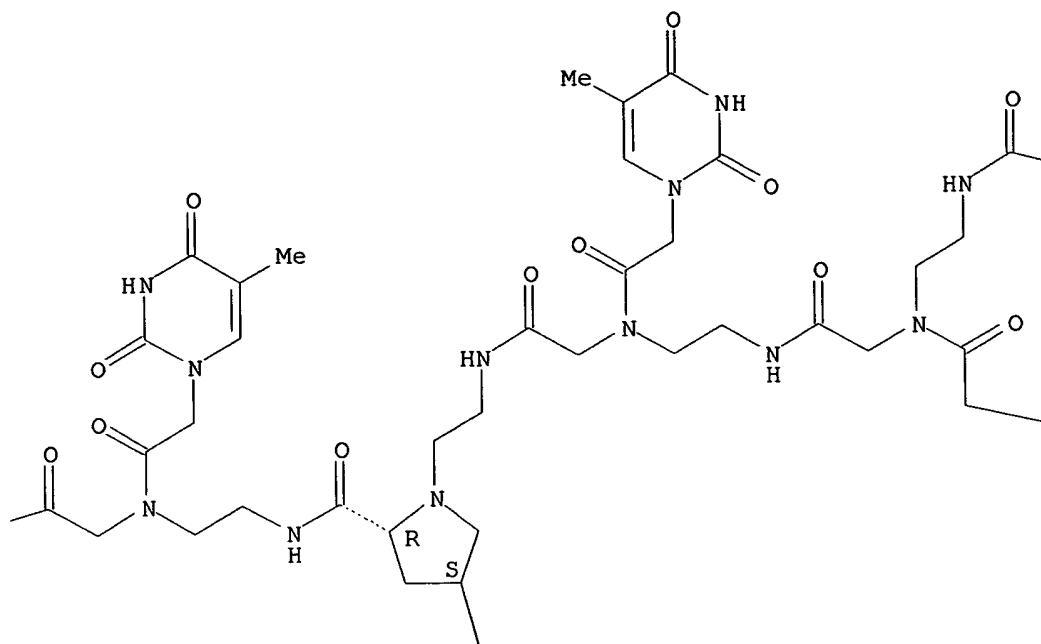
CN Peptide nucleic acid, (H-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro)-Bal-OH (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

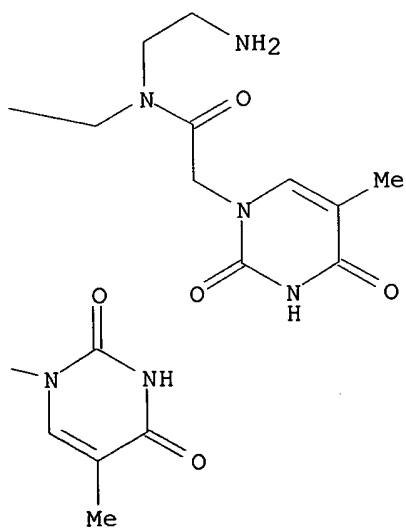
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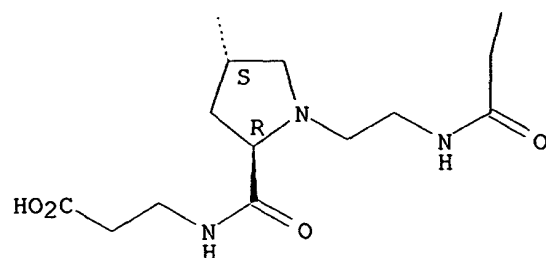
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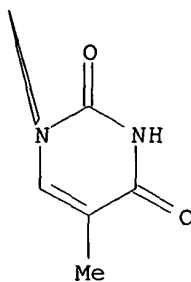
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RN 253307-84-5 HCAPLUS

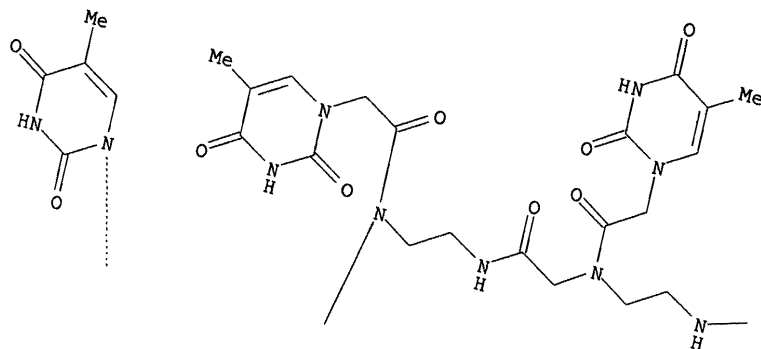
CN Peptide nucleic acid, (H-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro)-Bal-OH (9CI) (CA INDEX NAME)

Absolute stereochemistry.

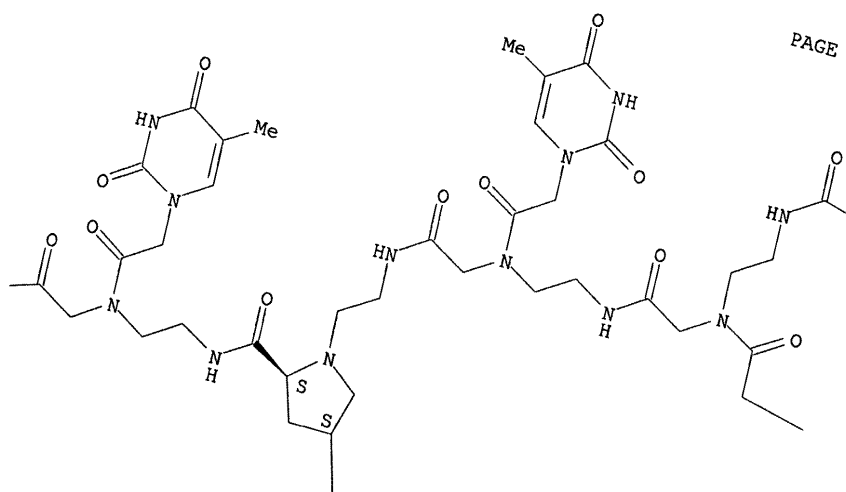
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July 17, 2002

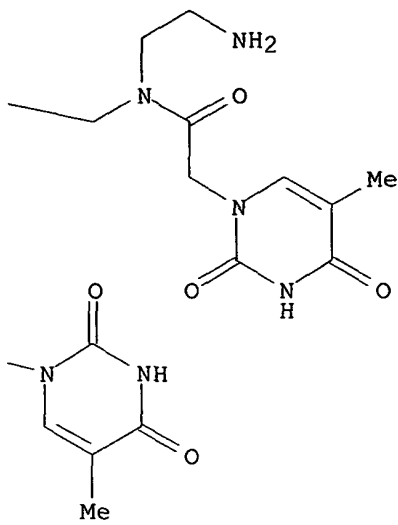


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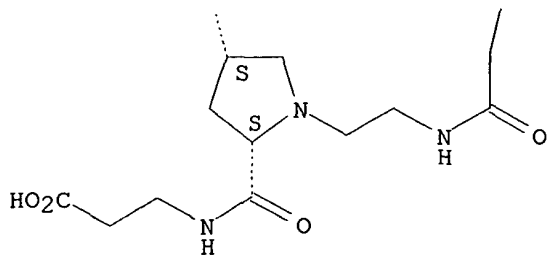


Searched by Paul Schulwitz (703)305-1954

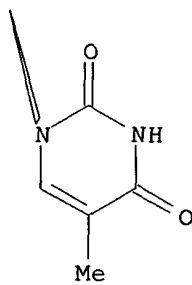
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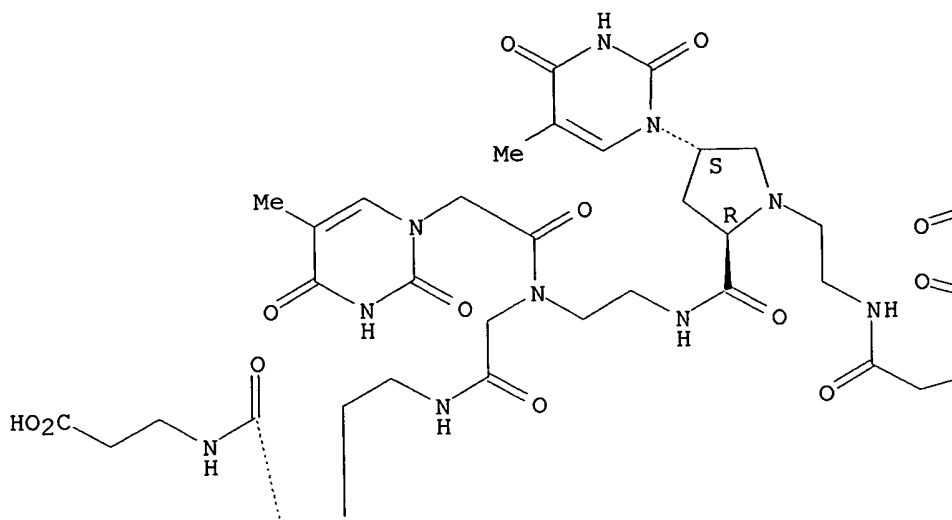


RN 253342-10-8 HCAPLUS
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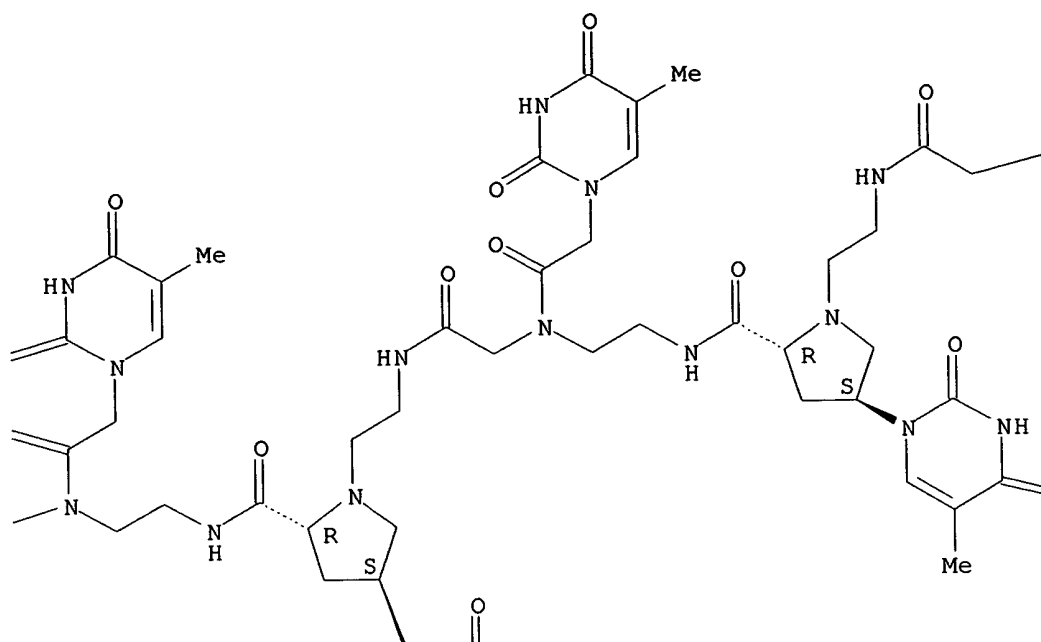
dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro)-Bal-OH (9CI) (CA INDEX NAME)

Absolute stereochemistry.

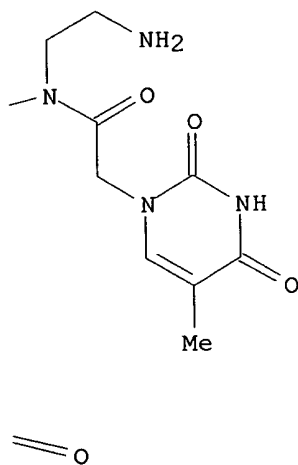
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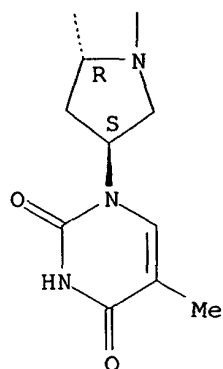
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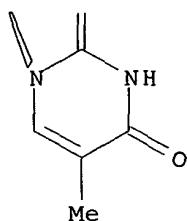
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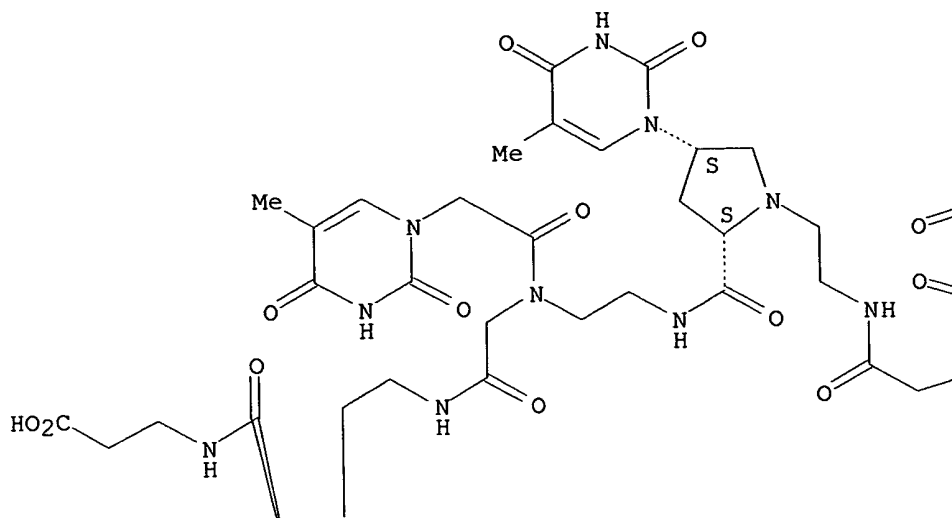
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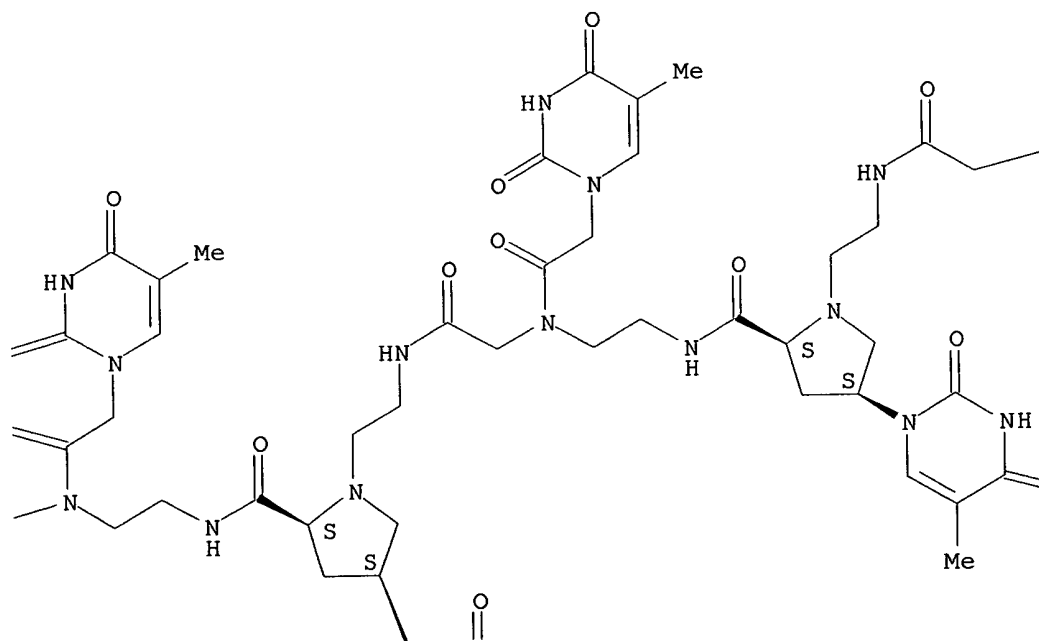
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 (CA INDEX NAME)

Absolute stereochemistry.

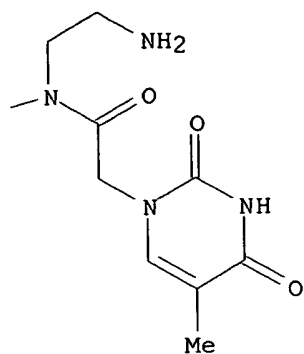
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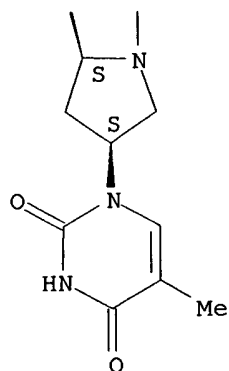
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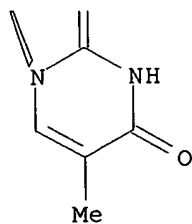
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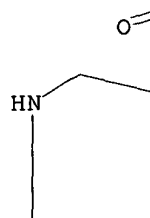
RN 253342-12-0 HCAPLUS
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dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-(4S)-1-(2-aminoethyl)-
4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-(4S)-1-(2-
aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-
(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-
D-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-
pyrimidinyl)-D-Pro-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-
1(2H)-pyrimidinyl)-D-Pro)-Bal-OH (9CI) (CA INDEX NAME)

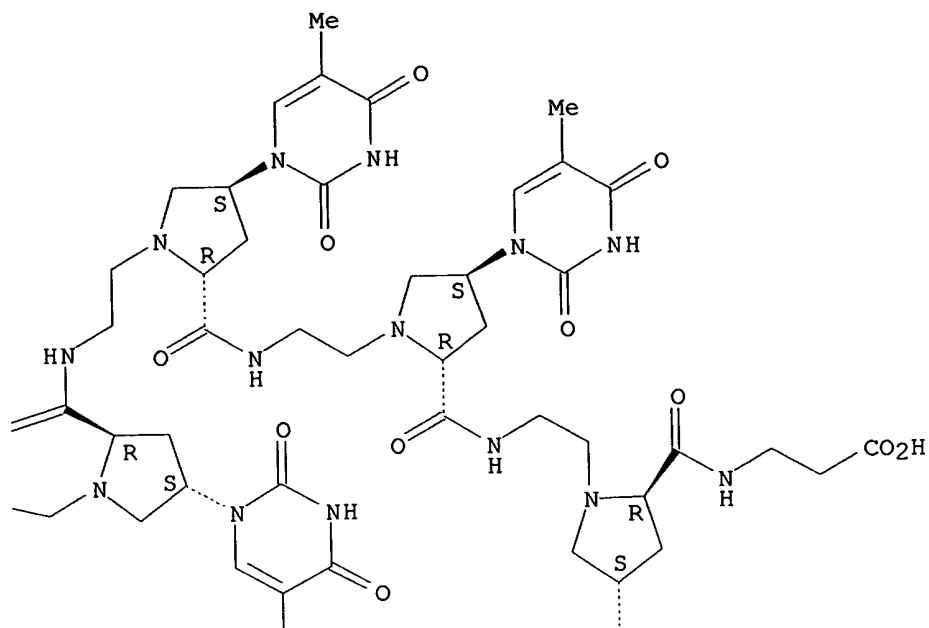
Absolute stereochemistry.

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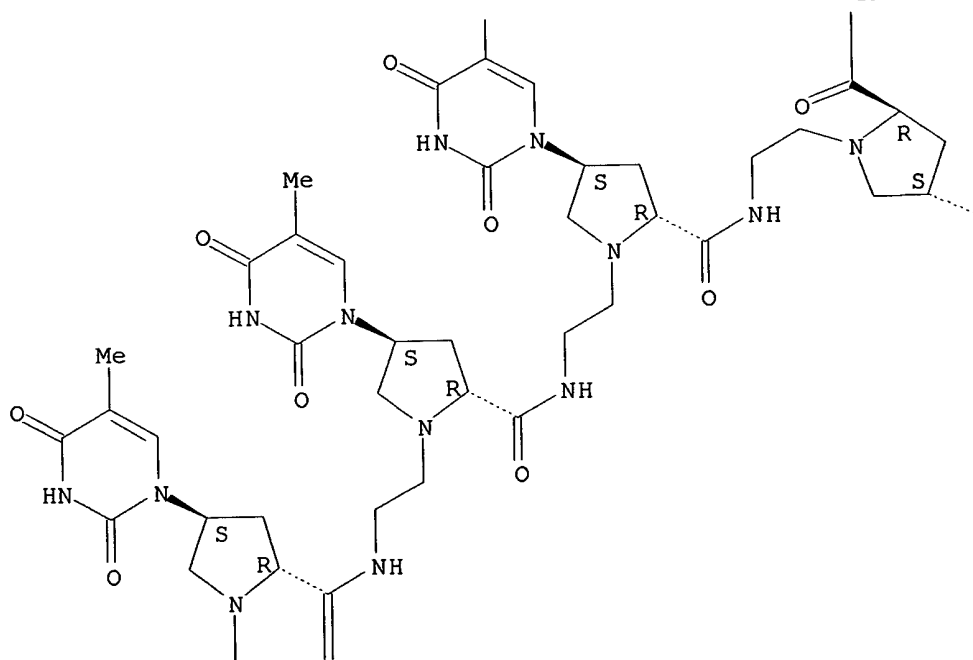
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|



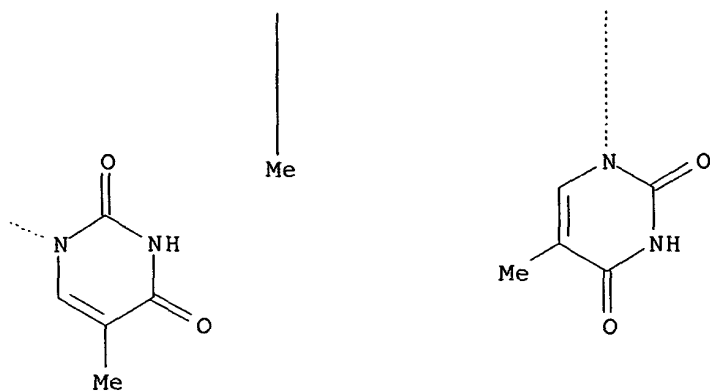
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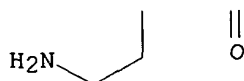
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RN 253342-13-1 HCAPLUS

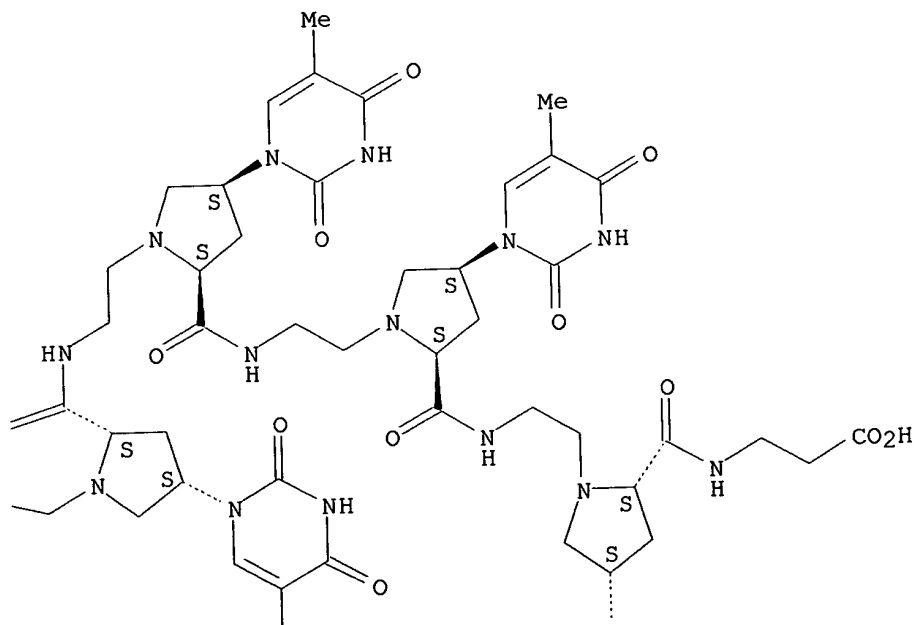
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Absolute stereochemistry.

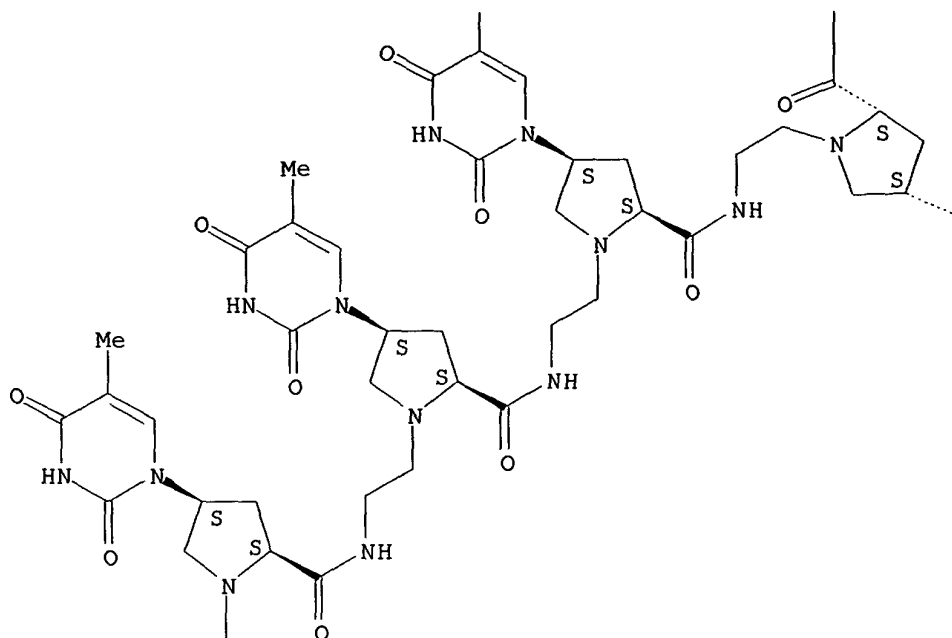
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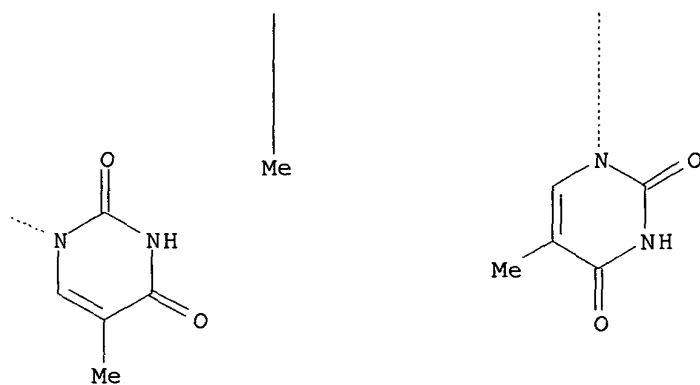
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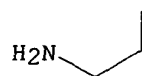
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